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TWO TOOLS IN ONE

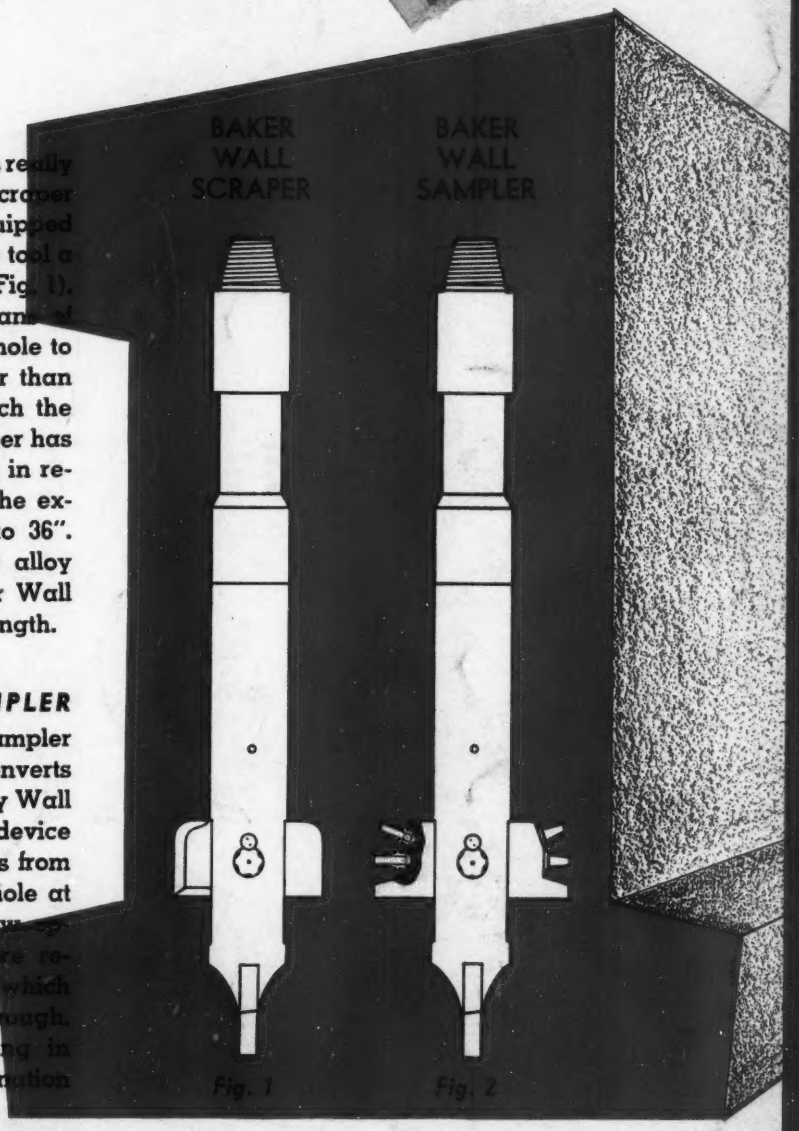

Fig. 1 Fig. 2

The Baker Rotary Wall Scraper is really "Two Tools in One" . . . a Wall Scraper and a Wall Sampler. When equipped with Scraper Blades, making the tool a Baker Rotary Wall Scraper (see Fig. 1), it provides a safe, efficient means of enlarging the walls of an open hole to a diameter considerably greater than the casing or hole through which the tool is run. The Baker Wall Scraper has a remarkable reaming capacity in relation to the O. D. of the tool—the expansion range being from 4" to 36". Correct design and the use of alloy steels has resulted in the Baker Wall Scraper having tremendous strength.

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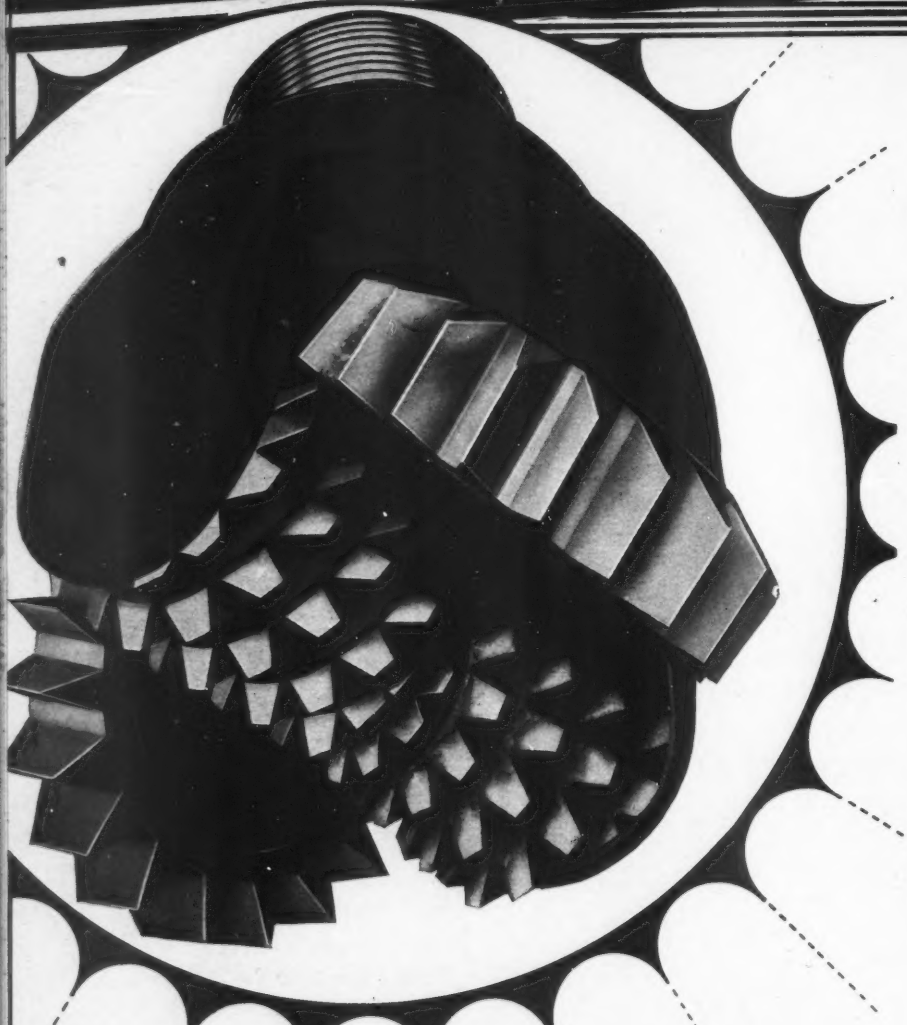

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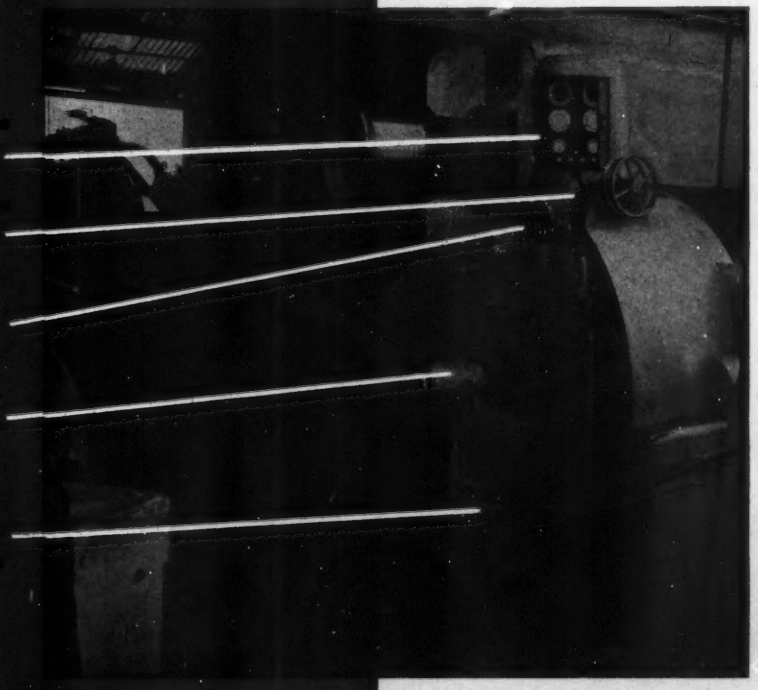

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Fletcher Refinery Converts Heavy Fractions

and Bottoms Into Premium Products

The California Oil World here acknowledges the splendid cooperation of Universal Oil Products Co., licensors of the Dubbs Cracking Process and non-selective catalytic polymerization, in the presentation of engineering and operating data included in this article.

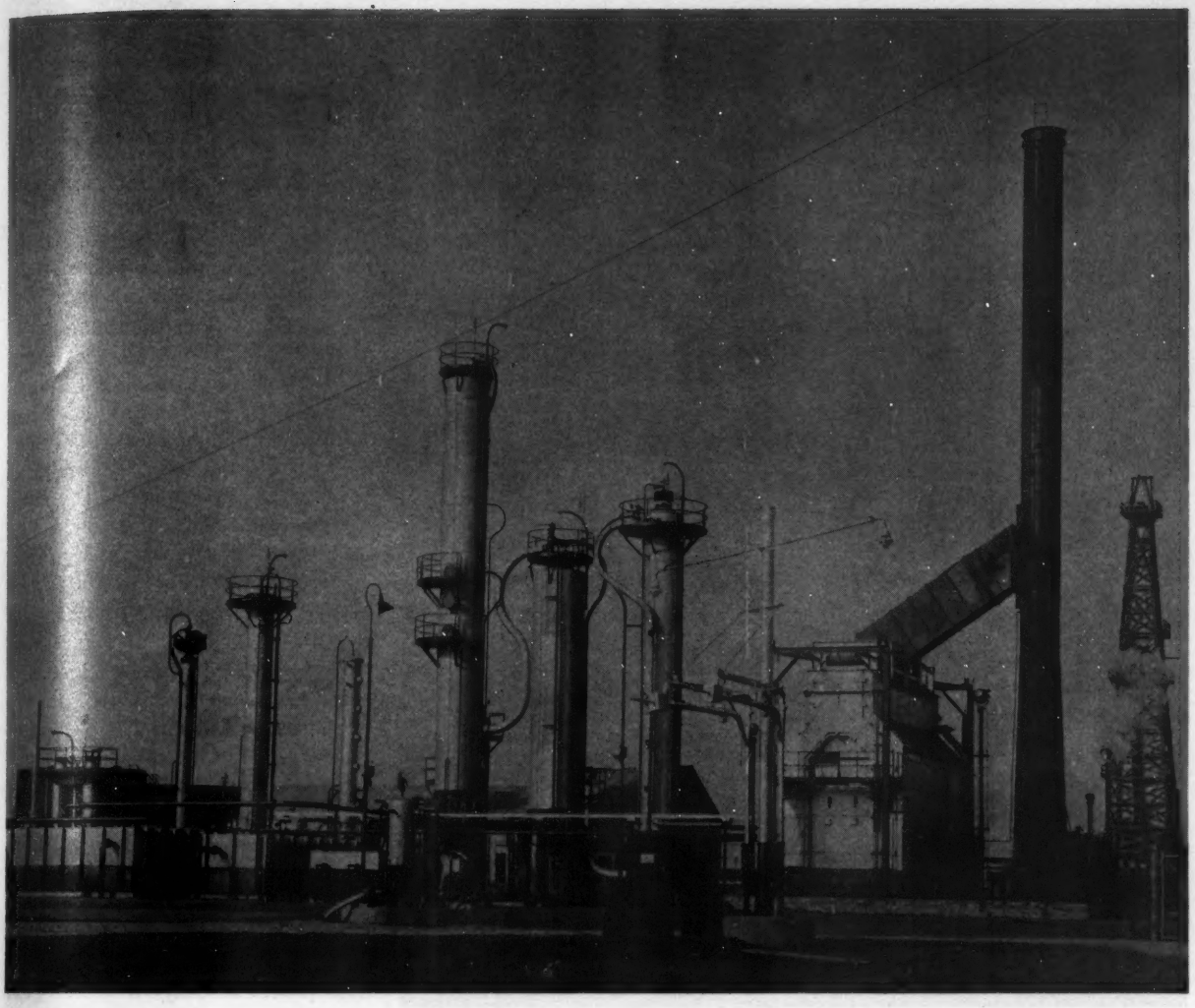
Thomas A. Edison's incandescent lamp was making devastating inroads into the kerosene business and anyone minded to seek a living handling petroleum products had to bank heavily on the slim possibility that horseless carriage manufacturers would continue to increase their yearly output in the face of the triple threat of cooling of public interest, the limitation of navigable highways, and the apparently visible limit of fuel supply.

Two brothers, Steen and Frank Fletcher, took what their Scottish ancestors would have considered a gamble. True, in that year, 1912, the number of automobiles registered in all the states had skyrocketed to 356,000, and the number of trucks had more than doubled to a figure of 22,000, but, how long would the supply of petroleum products last? You could count the oil fields of California on the fingers of both hands. Coalinga, Kern River, Lost Hills, McKittrick, Midway-Sunset, Santa Maria - Lompoc, Newhall, Brea-Olinda and Coyote. The entire crude oil production in the United States in 1912 was only 223,000,000 barrels, and according to many authorities the end was in sight.

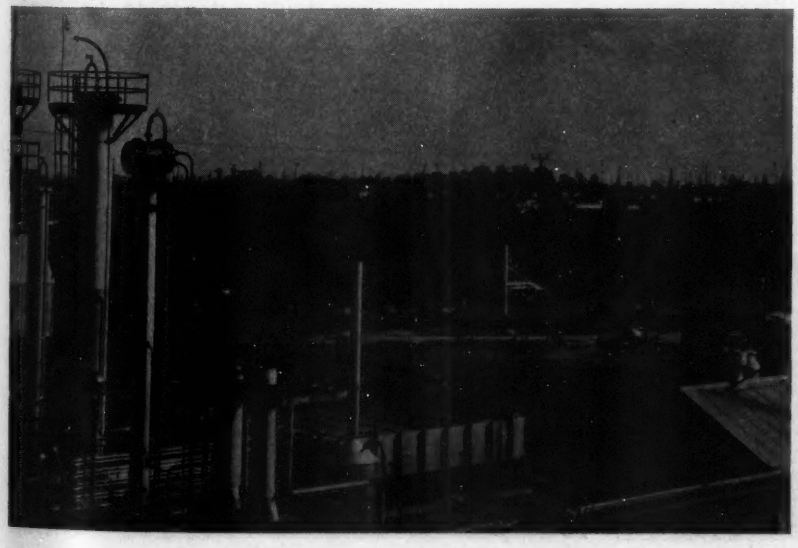
The canny brothers could be depended upon to move slowly in this field and to consolidate each gain with a view to building a permanent business structure if their estimates of the growing automobile trade were correct. Their first investment was in a bulk plant, a much simpler layout than the almost automatic arrangements of today. There was no loading rack for tank trucks or transports for the simple reason that none was expected to make an appearance at the plant. The gasoline was received at the plant in the miniature tank car lots of that day, and shipped to consumers or resellers in 108-gallon barrels stacked in box cars.

That first bulk plant in Boise, Idaho, was followed after a period of five years of growth and consolidation by a second plant at Nampa, Idaho. Gasoline had far outstripped kerosene and industrial lubricants as the principal sales product. The brothers had done better than hold their own in what had become the most highly competitive activity in the business world. No one knows better than they the difficulties of small enterprises in the welter of guaranteed margins, rebates, contract riders, uncertain sources, heavy transportation charges, switching

The Brothers Fletcher, who ran a tiny bulk plant in Boise up to an organization with 55 bulk plants, 300 service stations, 3 ocean terminals and refinery which produces only premium gasoline and fuel oil.



Sitting on top of a prolific oil field, the Fletcher refinery will not run a single barrel of crude oil. The raw material, gas oil and fuel oil, is purchased from other refiners, giving competitors some relief on their by-products problem.



In the middle ground you see how Fletcher handles the old problem of traffic congestion.

charges, demurrage charges, handling charges, and the endless prohibitive restrictions placed by officious or timid officials in town and city.

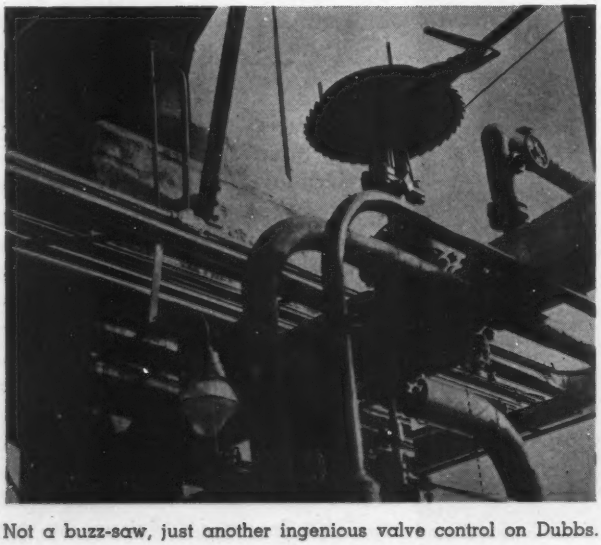
It was gravity then. The marketer had to meet different "high test" specifications for each area. Then came cracked gasoline and the problem of selling it in competition with the "superior" straightrun product. You could smell cracked gasoline a mile away, and it was certain to line or fill the fuel feed system with a sticky mess of varnish like gum. It was noted, however, that engines which were so "choked" with carbon that operation with straightrun was a noisy and difficult task, could run with increased efficiency on the

Shop fabrication by Consolidated Steel right in the district helped the builders better construction records.

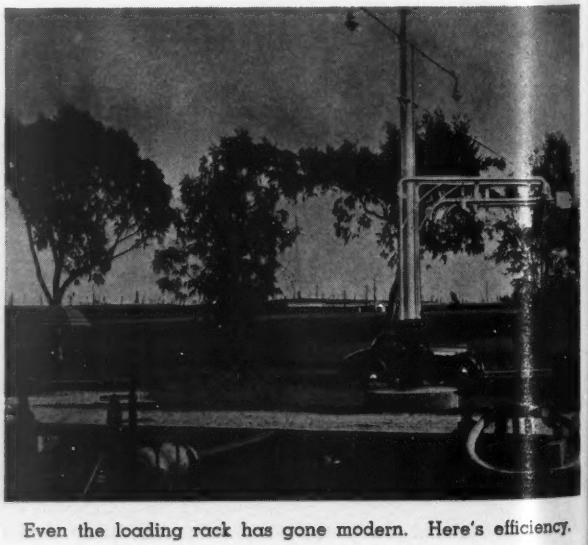
cracked gasoline. The cracked gasoline gave more "power", but at a cost of ruinous gum deposits and malodorous atmosphere. Then the marketers learned the trick of getting this additional power into their gasoline by additions of iron carbonyl, benzol, and other dopes. Then Midgley and associates brought out tetraethyl lead and made it safe for use as a power additive to gasoline. A Jap had discovered tetraethyl lead in the Mauve Decade, as a chemical curiosity without commercial possibilities. "High test" as the prime qualification for motor fuel began to give way to the term "aniline number," the forerunner of "octane number". Then cracked gasoline was freed of its disadvantages by treatment and addition of inhibitors. Then came polymer gasoline with still greater power.

How the brothers fared in the 27 years that span their entry into the oil business and the completion of their most important project, the ultra modern pyrolytic and catalytic plant for the production of premium motor fuel described and pictured in these pages, is attested by the growth of the brothers' Fletcher Oil Co.

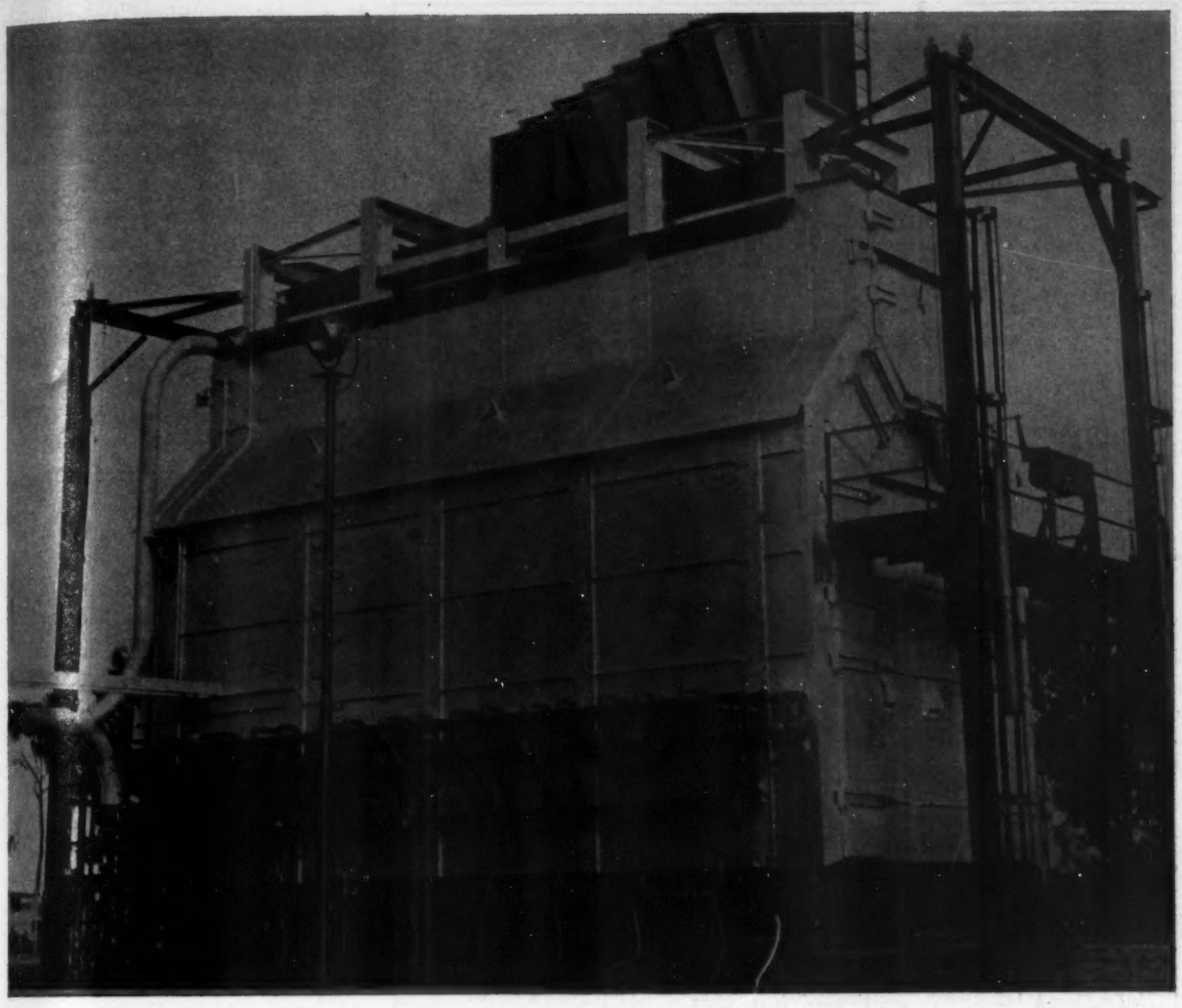
The Fletcher Oil Co. now has 55 bulk plants in Oregon, Washington and Idaho, and 300 retail outlets. Their business is with independents, resellers, jobbers and retailers, and their trade extends to California.



Not a buzz-saw, just another ingenious valve control on Dubbs.



Even the loading rack has gone modern. Here's efficiency.



You will hear a lot more about what these U. O. P. upshot pipe furnaces are doing in cutting plant costs and insuring longer runs.

The company has bulk tanker terminals at Tacoma and Vancouver, Wash. Most of the petroleum products are handled in tankers from Los Angeles and distributed from the Washington terminals. Out of Vancouver the Fletcher Oil Co. operates a barge ship up the Columbia River to Attalia, Wash., from where the products are distributed over a radius of 200 to 300 miles in transports and tank cars. Out of Tacoma the products move in barges in Puget Sound and in transports and tank cars.

Fletcher Oil Co. has been operating refineries in the Los Angeles District since 1934, first with nothing more than topping facilities at the Bandini Boulevard plant, and later in association with Pacific States Oil Co. at Wilmington.

The company's choice of equipment in carrying out the decision to manufacture and sell only the highest octane gasoline to independent outlets, is a happy one from the standpoint of stability of the crude oil market. This modern plant is not an additional encouragement to overproduction of crude oil because the raw material for it is the growing drug on the market, fuel oil and gas oil, not petroleum.

Fletcher Oil Co. built the new plant to meet special conditions in line with a special policy, both as to supply of raw material and marketing of products. Precedents that usually govern design, location and setup of such plants were disregarded. For that reason, the Fletcher installation possesses some features peculiar to itself.

In the first place, it has no crude supply, and it does not need any. So far as we know, it is the only refinery on the Pacific Coast—or in the whole country for that matter—designed to operate on intermediate products from other refineries and to market part of its products through still others.

The plant consists of a single coil Dubbs cracking unit, rated charging capacity 1100 barrels per day of gas oil, and a U.O.P. non-selective catalytic polymerization unit of sufficient capacity to convert to polymer gasoline the olefins contained in the cracked gases.

The plant was built on a bare strip of land on Main Street, in Wilmington, where no refinery existed. It is a whole refinery in itself.

While adapting the plant strictly

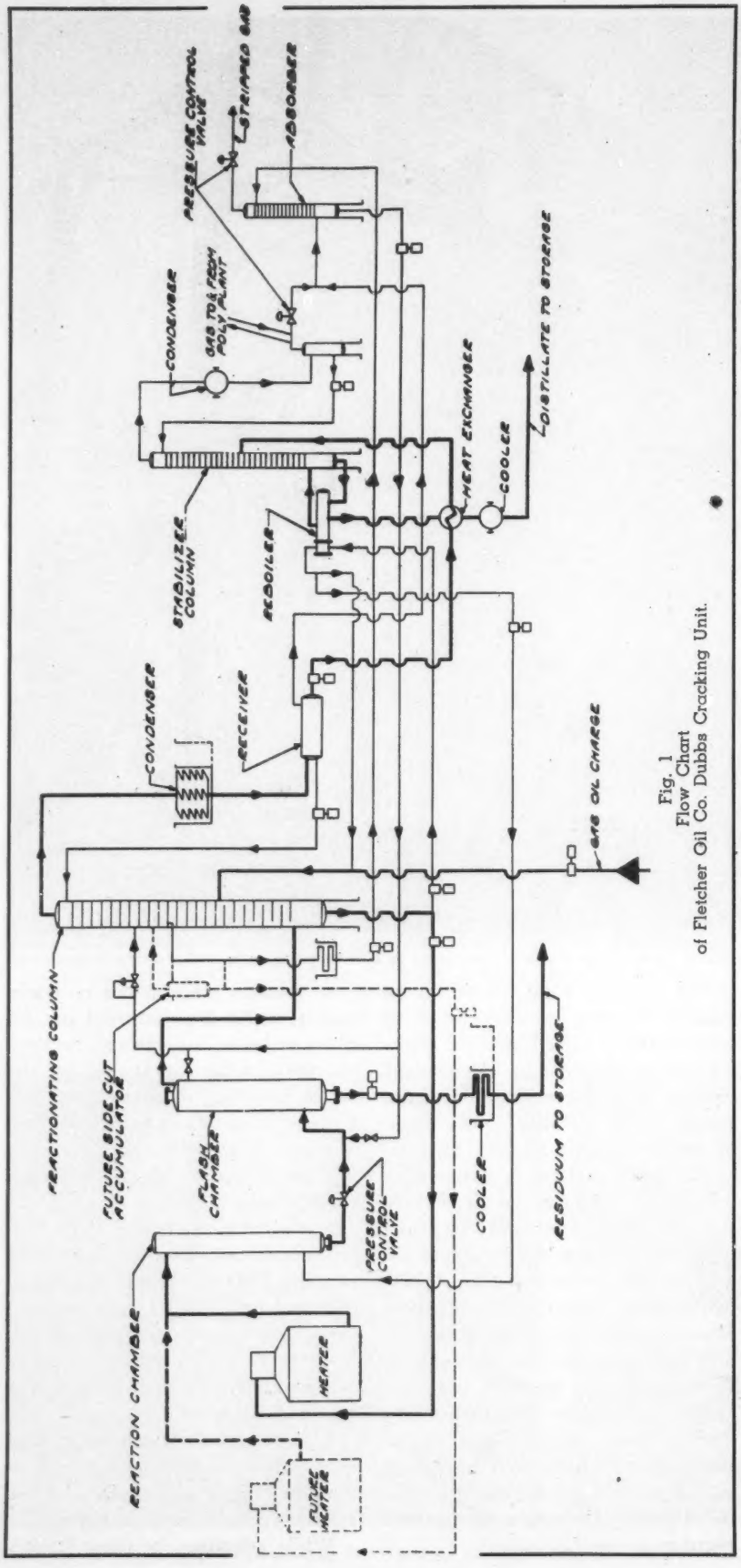


Fig. 1
Flow Chart
of Fletcher Oil Co. Dubbs Cracking Unit.

to present conditions and policies, Fletcher has had in mind that conditions change frequently and rapidly in the oil business. Therefore, the plant has been designed with an eye to future changes if and when called for at lowest possible cost.

It is designed to crack gas, oil or kerosene distillate or fuel oil, whichever can be bought at most advantageous prices from other California refineries.

The products are cracked gasoline of 72-73 octane rating (L-3 Method) and cracked fuel oil of low gravity, low viscosity and low cold test. The motor fuel is marketed through Fletcher-controlled stations in California, Idaho, Oregon and Washington. The fuel is taken by another refiner, whose advertising and sales promotion of Dubbscracked fuel oil have built up a demand that requires more than he can produce.

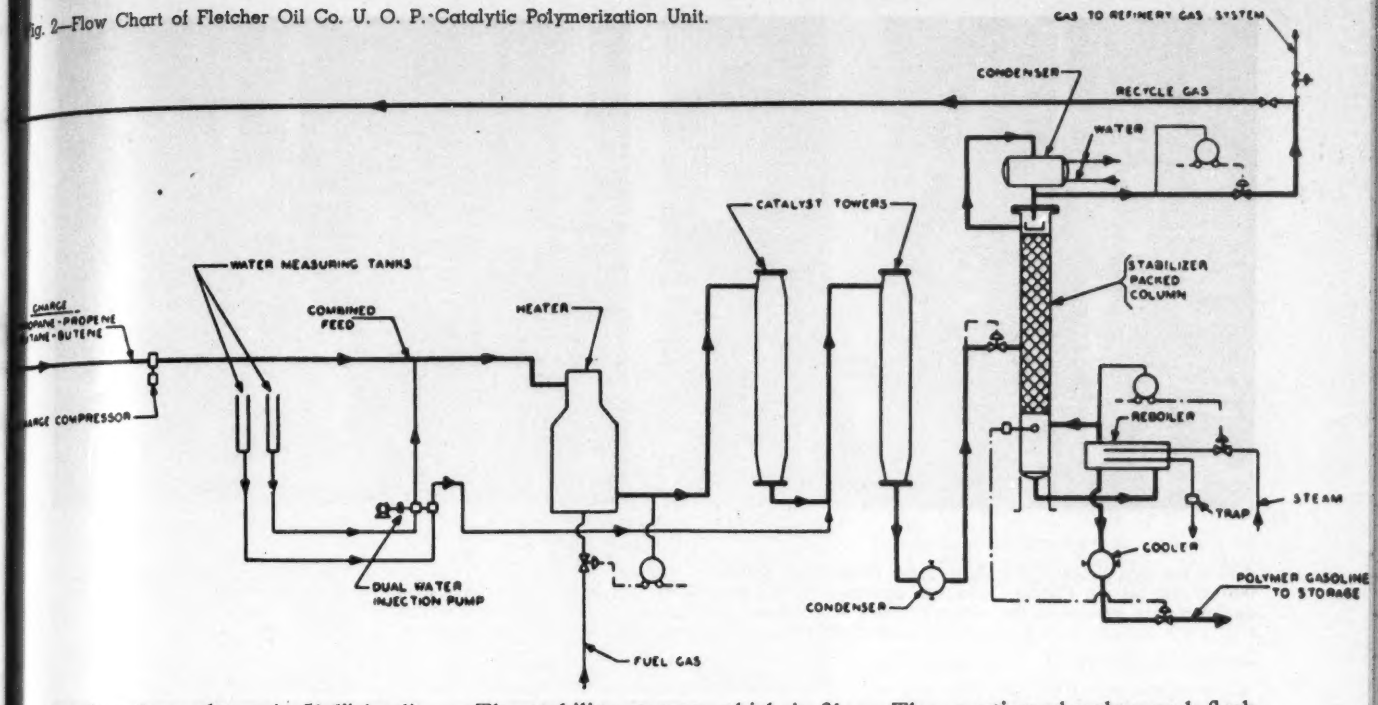
The Fletcher units were built by Fluor Corp., Ltd., in accordance with Universal Oil Products Co.'s design and specifications. The balance of the refinery was designed and built by the Fluor Corp., Ltd.

The major elements of the cracking unit are U.O.P. upshot furnace, reaction chamber, fractionating column, stabilizer, and absorption equipment.

The furnace uses Key Co. type 7000 chromium-molybdenum headers and chromium-molybdenum with silicon alloy seamless steel tubes. It is equipped with burners to use either fuel oil, natural gas or the stripped cracked gas from the polymerization unit. Uniform temperatures are maintained by remote control.

Construction of all vessels conforms to the latest API-ASME and California codes for pressure vessels. The reaction chamber was stress-relieved, after welding, and X-ray tested. The reaction chamber is 4'-6" in diameter, x 40' high, and designed for safety valve setting of 475 pounds and design temperature of 950°F. The flash chamber is 6'6" in diameter x 30' high, designed for safety valve setting of 105 lbs. and design temperature 850°F. The

Fig. 2—Flow Chart of Fletcher Oil Co. U. O. P. Catalytic Polymerization Unit.



fractionating column is 5'-6" in diameter x 55' high, equipped with cast iron bubble trays with internal manways, cast iron caps and side-to-side pans.

The stabilizer tower, which is 3' in diameter and 38'-6" high, likewise has removable cast iron trays. Safety valve setting is 275 pounds and design temperature of 400°F.

The reaction chamber and flash chamber are alloy lined throughout with 11-13 chrome lining. The fractionating column in the lower section is also alloy lined with a 5/64"

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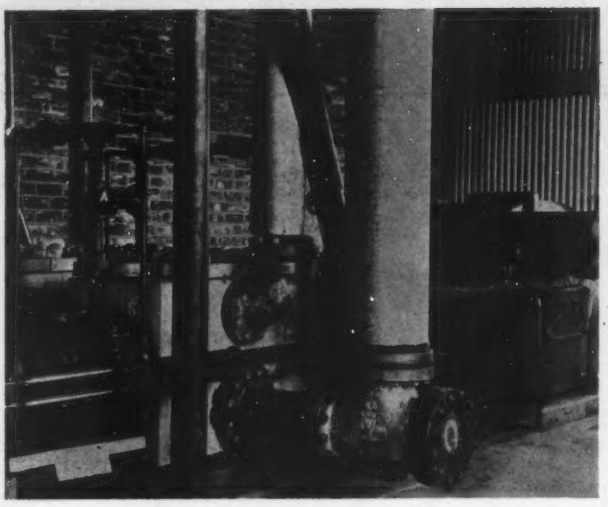
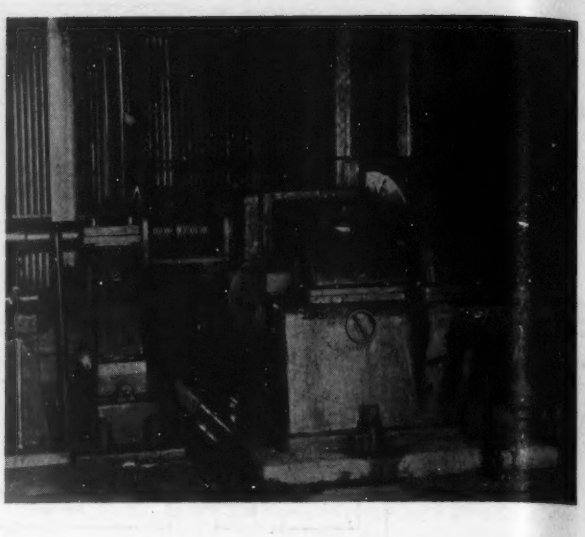
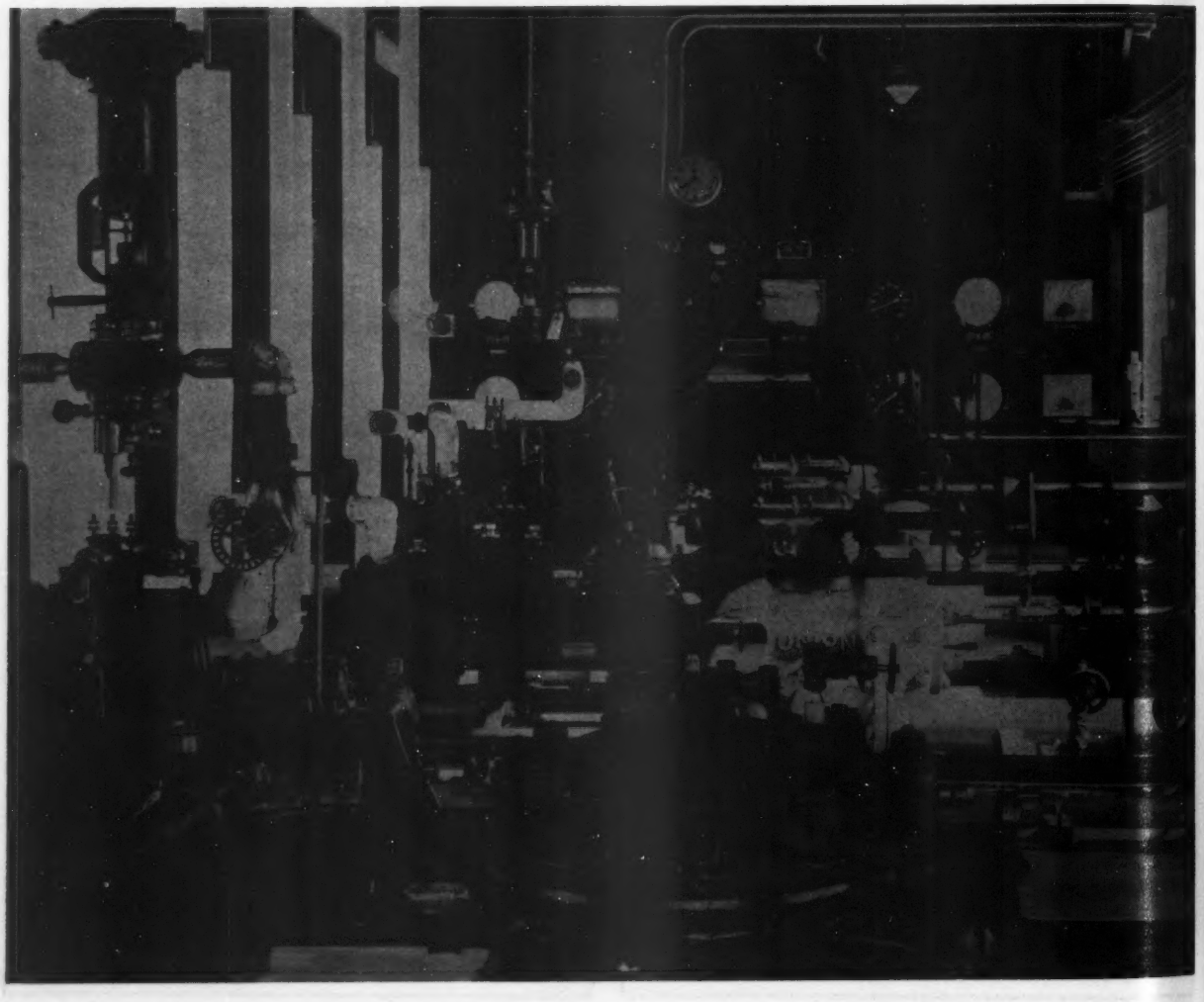
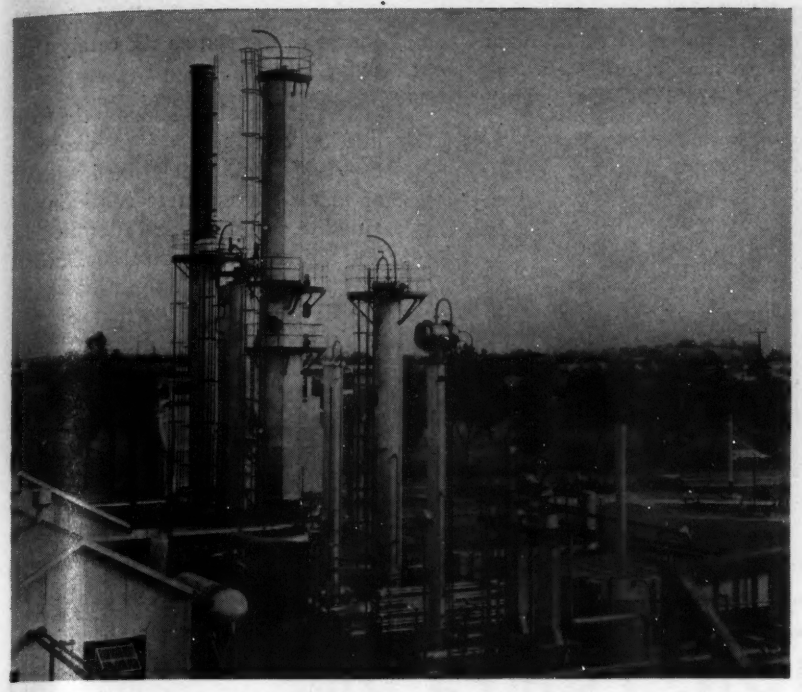


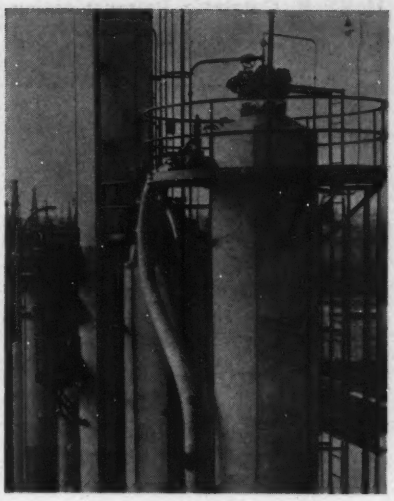


Above are two views of the heart of the plant. The horizontal duplex plunger hot oil pump, built by Union Steam Pump Works, is the largest on the Pacific Coast. It operates at 690 pounds discharge and is driven by an Elliott steam engine. Below, the brain and coronary system of the refinery. Here are located instruments for all units of the plant. Detailed operation of the plant can be closely watched at all times with this arrangement.





General view of the pyrolytic cracking side of the plant from control house at left to tube condensers at right.



This is a great improvement over the old style towers topped by bulky dephlegmators and sharp bends.

11-13 chrome lining. All process piping from the heater to the fractionating column is 4-6 chrome piping, thus making this the safest plant the engineers know how to design for the particular conditions involved.

Process pumps are steam-driven, and the hot oil pump is a horizontal duplex plunger pump built by Union Steam Pump Works, and driven by an Elliott steam engine. This pump has 4-6 chrome blocks and alloy plungers. The size of the pump is 5⅝" x 16", operating at 690 pounds discharge.

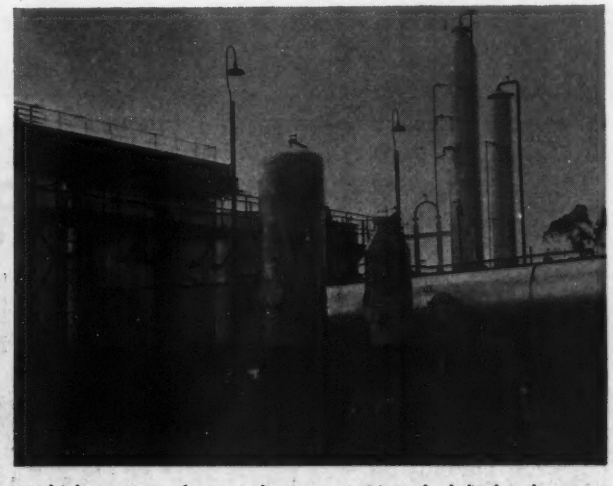
The main pump and control house is divided into a hot pump room, cold pump room and a control room.

This building is of fabricated steel structure, and in the control room section are located instruments for all of the units of the plant.

Detailed operation of plant can be closely watched at all times with this arrangement. It provides instruments and controls for the regulation of temperature and pressures throughout the process equipment.

Recording temperature and pressure controllers have been provided in all essential locations. Recording potentiometers give continuous records of furnace outlet temperatures and indicating potentiometric points are provided for checking temperatures at important locations throughout the plant. Dropout valves are provided with cable controls for remote operation.

Fig. 1 is a flow chart of the Fletcher cracking unit. (page 8).



Two views of the U. O. P. non-selective catalytic polymerization plant which converts former plant wastes into fuel fit for the most critical airplane engines.

U. O. P. Catalytic Polymerization Plant

The non-selective polymerization unit processing cracking plant stabilizer gas consists essentially of a charge compressor, heater catalyst towers and a stabilizer together with connecting heat exchange equipment, as shown by Fig. 2.

The charge compressor is an Ingersoll-Rand 4½" x 9", single stage, double acting, horizontal machine, driven by a Waukesha gas engine. The normal capacity of the compressor is 575,000 cubic feet per day at suction conditions of 150°F. and 180 pounds, and a discharge pressure of 500 pounds.

The heater raises the temperature of the polymerization plant feed from the compressor to about 325°F.-425°F., the temperature being increased periodically during the course of the run as the catalyst activity falls off.

The roominess of the plant means safety for employes and more efficiency.

The heater shell housing the combustion chamber is 4'-6" diameter, by 7'-8" high, and is lined with 3" of insulating concrete consisting of Haydite, Lumnite and Vermiculite. The 2" combined spiral and helical coil through which the process gas passes is arranged so that there is about a 3" clearance between the coil and the heater walls. The heater is automatically gas fired by a diaphragm control valve operated by a temperature controller with control point located at inlet of first catalyst tower.

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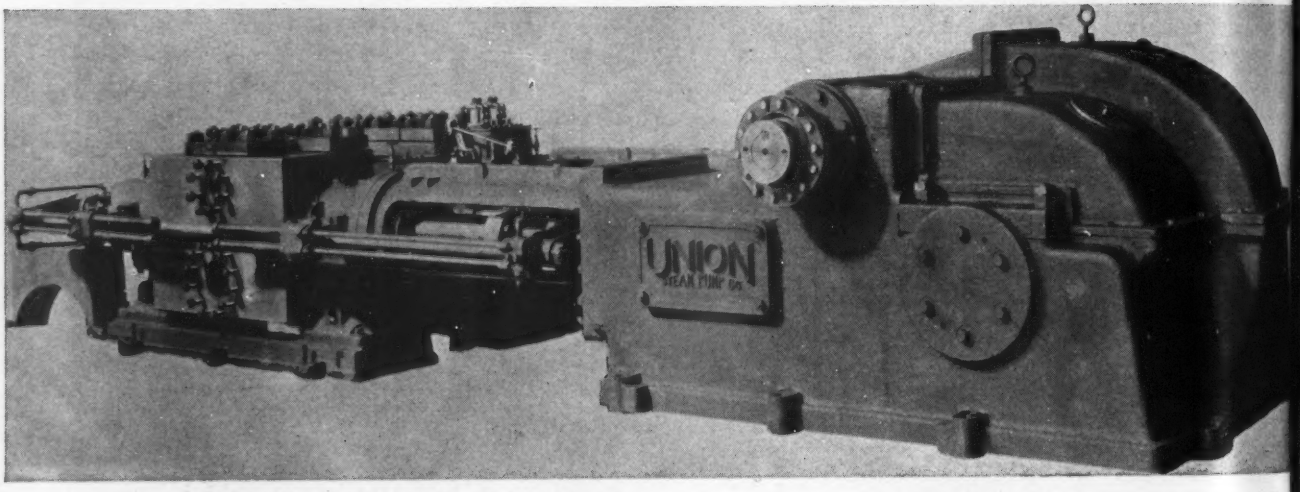

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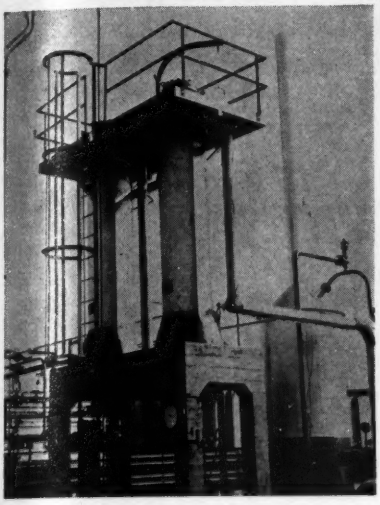
P. L. Armstrong, Sales Engineer, Los Angeles, Calif.

After leaving the heater, the gas passes to the catalyst towers, of which there are two. They are arranged in series, 24″ in diameter x 14′-6″ long, designed for 500 pounds at 500°F. The catalyst towers are filled with a solid phosphoric acid catalyst. After passing through the condenser, polymer plus unreacted fractions from the catalyst towers



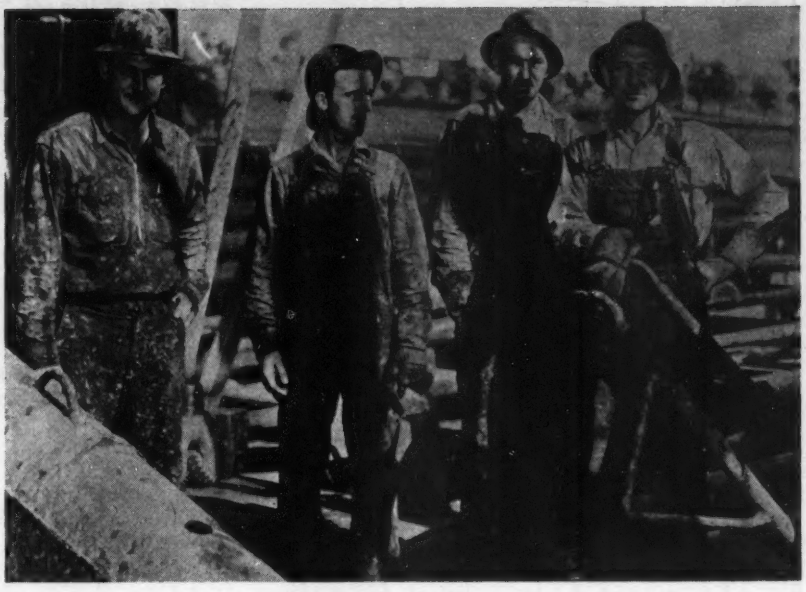
Recording temperature and pressure controllers are located at essential points.

are fed under pressure to the polymerization stabilizer which is fabricated from 18″ seamless pipe and is 30′-6″ long, designed for 325 pounds at 350°F.

The stabilizer is packed with ½″ ceramic Raschig rings. The stabilized polymer gasoline is withdrawn through a cooler to storage and the spent gas is released through a pressure control valve to the refinery fuel system.

Since a slight amount of moisture is required in the gases to improve the polymerization reaction, condensate from plant steam is charged from two measuring tanks made of 6″ pipe to the discharge of the compressor and to the process line between reactors, respectively, at the rate of 1.2 and 2.2 gallons per hour.

Water in the above amounts is delivered by a ⅜″ and 7/16″ x 1¼″ dual Hills-McCanna proportioning pump with constant speed motor drive and adjustable strokes, thus permitting careful control on the

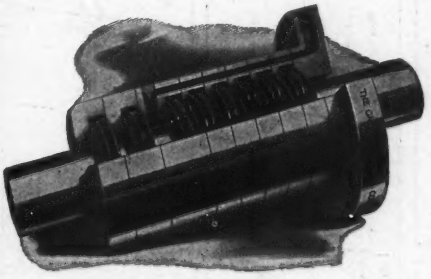


On the Potrero Golf Club development, left to right: A. P. Horney, E. B. Riley, Lou Dollins, and Frankie Burke, drilling Basin Oil Co.'s Potrero No. 6.

quantities pumped by each cylinder.

In order to dilute the charge gas to the desired olefin concentration, piping is so arranged that gas after pressure control valve on polymerization stabilizer can be admitted in part directly, if needed, to the compressor suction as well as to refinery fuel system. Should the suction pressure drop the compressor will automatically draw on recycle and if pressure tends to increase, the pressure control valve operating on gas to fuel will open more until constant suction pressure is attained. With this system of controls smooth operation can be realized with a minimum of effort on the part of the operator. If it is desired to shut down the polymerization plant, this can be accomplished without upsetting the cracking plant in any way.

An Improved Metal Packing For Gas Compressors



GARLOCK 875

The improved, non-abrasive iron which we now use in making GARLOCK 875 Metal Packing offers great resistance to wear. Frequent periodic tests guarantee the uniformity of this quality controlled iron. GARLOCK 875 gives long, dependable service on high or low stage gas compressors.

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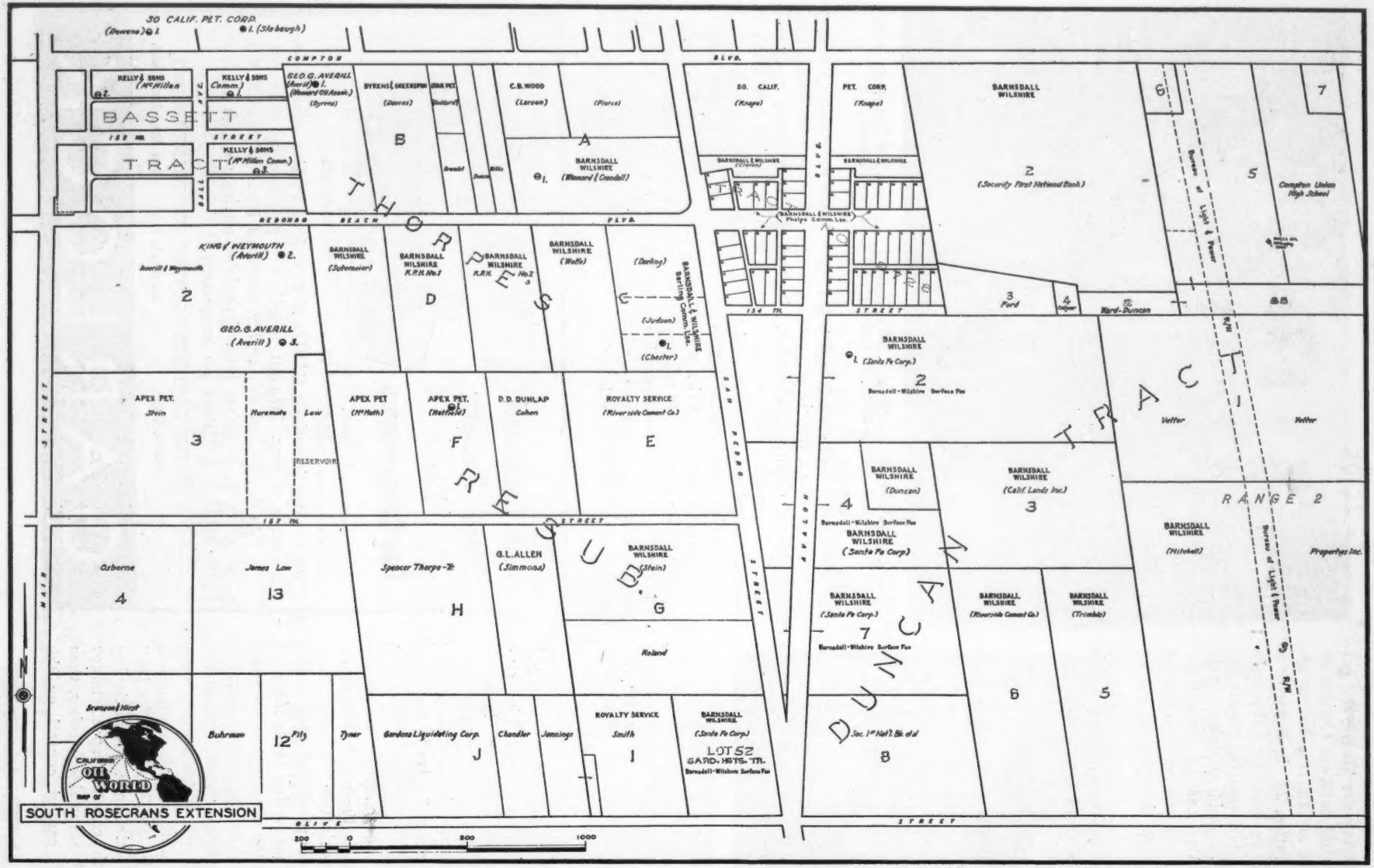
GARLOCK

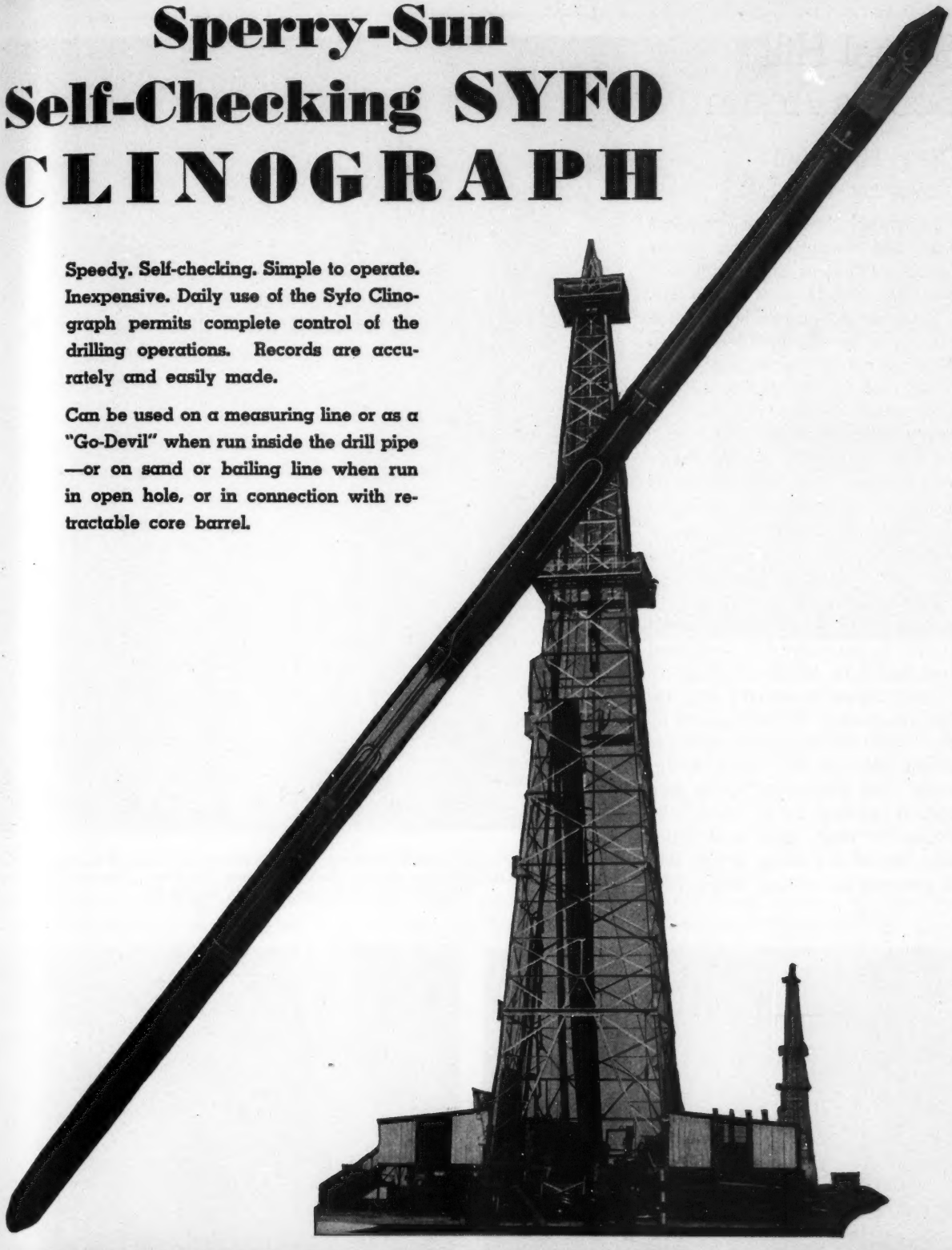


One of the most interesting areas in California is that pictured here which lies immediately southeast of the Rosecrans field. Discovery well of the new extension is Howard Oil Associates No. 1 which was completed by Dr. Geo. G. Averill in July flowing 100 bbls. a day from 7644 ft. Dr. Averill's No. 2 soon after extended the area to the south by coming in at the same rate. Barnsdall Oil Co. then finished Barnsdall-Wilshire-Darling No. 1 flowing 400 bbls. of oil and 300 bbls. of water. Southern California Petroleum Co. obtained the largest yield in Slabaugh No. 1 which built up to more than 800 bbls. daily.

Sperry-Sun Self-Checking SYFO CLINOGRAPH

Speedy. Self-checking. Simple to operate. Inexpensive. Daily use of the Syfo Clinograph permits complete control of the drilling operations. Records are accurately and easily made.

Can be used on a measuring line or as a "Go-Devil" when run inside the drill pipe —or on sand or bailing line when run in open hole, or in connection with retractable core barrel.



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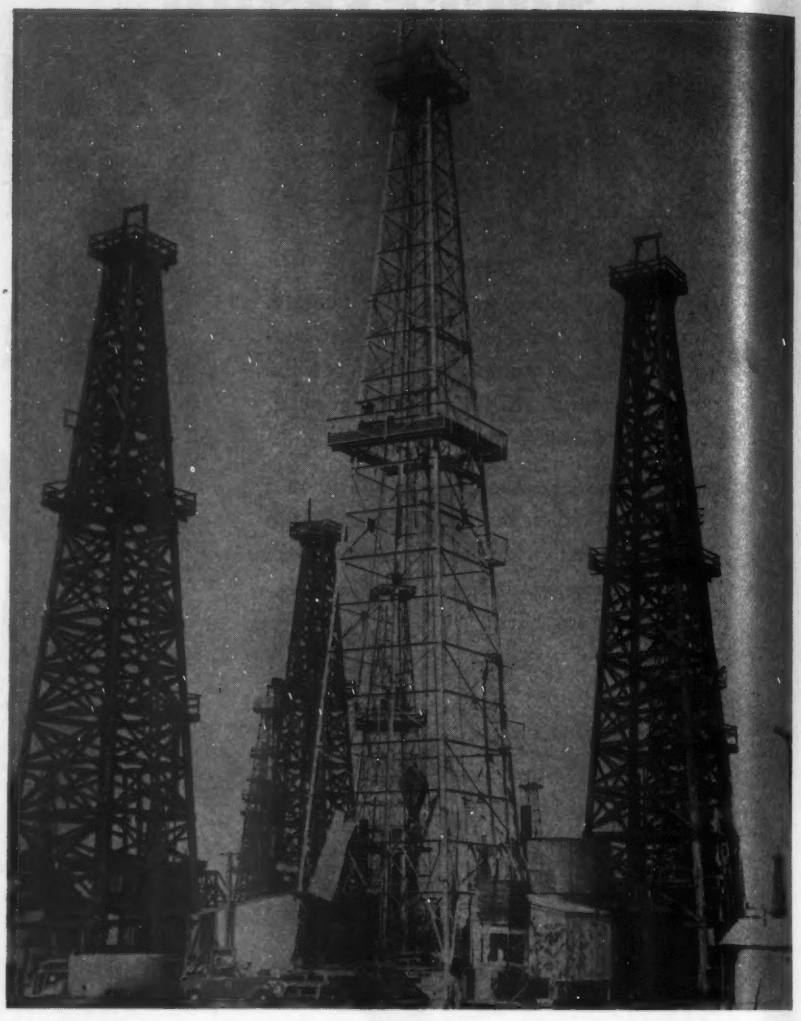
Southern California Petroleum Co. obtained the largest yield in Slabaugh No. 1 which built up to more than 800 bbls. daily.

Signal Hill Scores Again

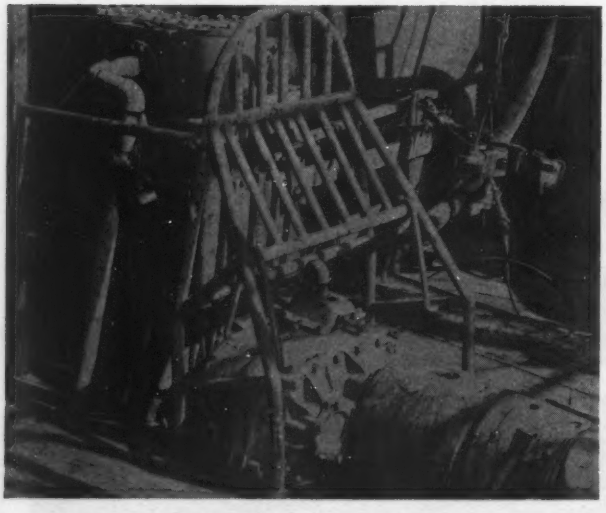
Deep Hill Well Flows By Gas Lift

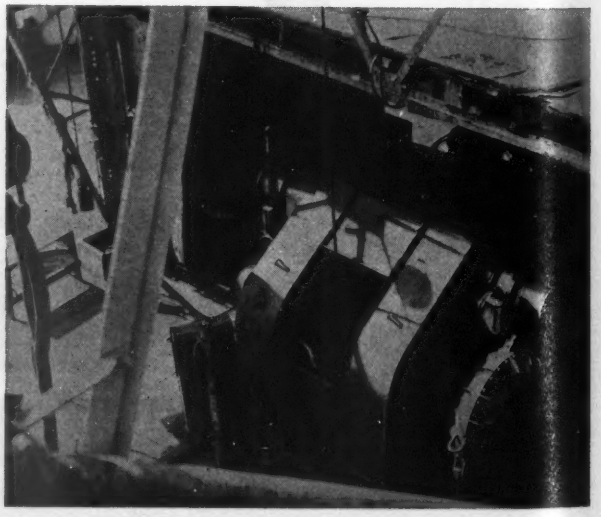
Following closely the precedent established exactly one year ago by De Soto Oil Co.'s Signal Hill deep zone discovery, Dormax Oil Co. No. 1 would not flow naturally but is apparently a fine producer by gas lift. Although not yet on production long enough for final judgment, the new well seems destined to become a steady producer in the 350 to 500 bbl. class, a rate which will provide a reasonably short payout time if maintained as consistently as in the predecessor. Gravity of the oil is slightly over 30 degrees, API, and the water content is negligible.

Mechanically, Dormax No. 1 is completed with 7 in. casing cemented at 9552 ft. and with a 5 in. perforated liner landed on bottom at 10,411 ft. Located higher structurally than the De Soto project, Dormax opened up about twice the amount of zone, and should have an even flatter decline curve. The greater part of the deep horizon appears to be shale with streaks of hard, tight sand which seem capable of building up high shut in pressures but will not release fluid



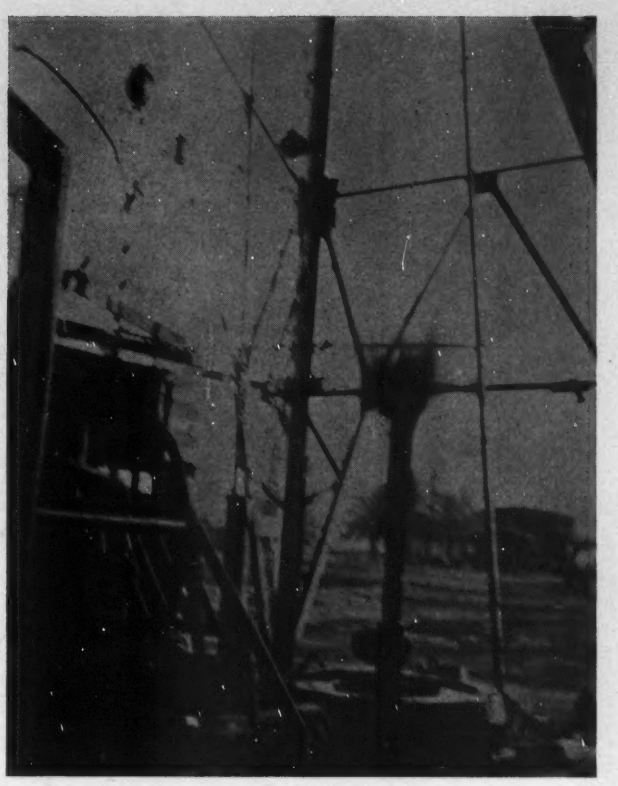
The deepest well in the Long Beach field, 10,411 ft., is located in one of the most heavily drilled areas. Only Ventura Avenue, Kettleman Hills, Rio Bravo, Greeley and Wasco surpass this producing depth in California.





Latest type of vertical engine table drive was used by Dormax. Engine, two-speed gearbox and 24-in. oil bath table comprise one portable unit. The compact 7½ drawworks was powered by a Twin Ideal Ajax Engine.

Good, heavy equipment is a necessity in efficiently drilling deep oil wells. This 24-in. oil bath table made operation as silent as your 1940 model automobile, a miracle in the drilling art.



Signal Hill, the sleeping giant, stirs again. Oil men are confident this second deep zone completion will be the starter for a drilling campaign. Note how gas ruined the picture by refracting the light waves.

with sufficient rapidity to flow naturally at a commercial rate.

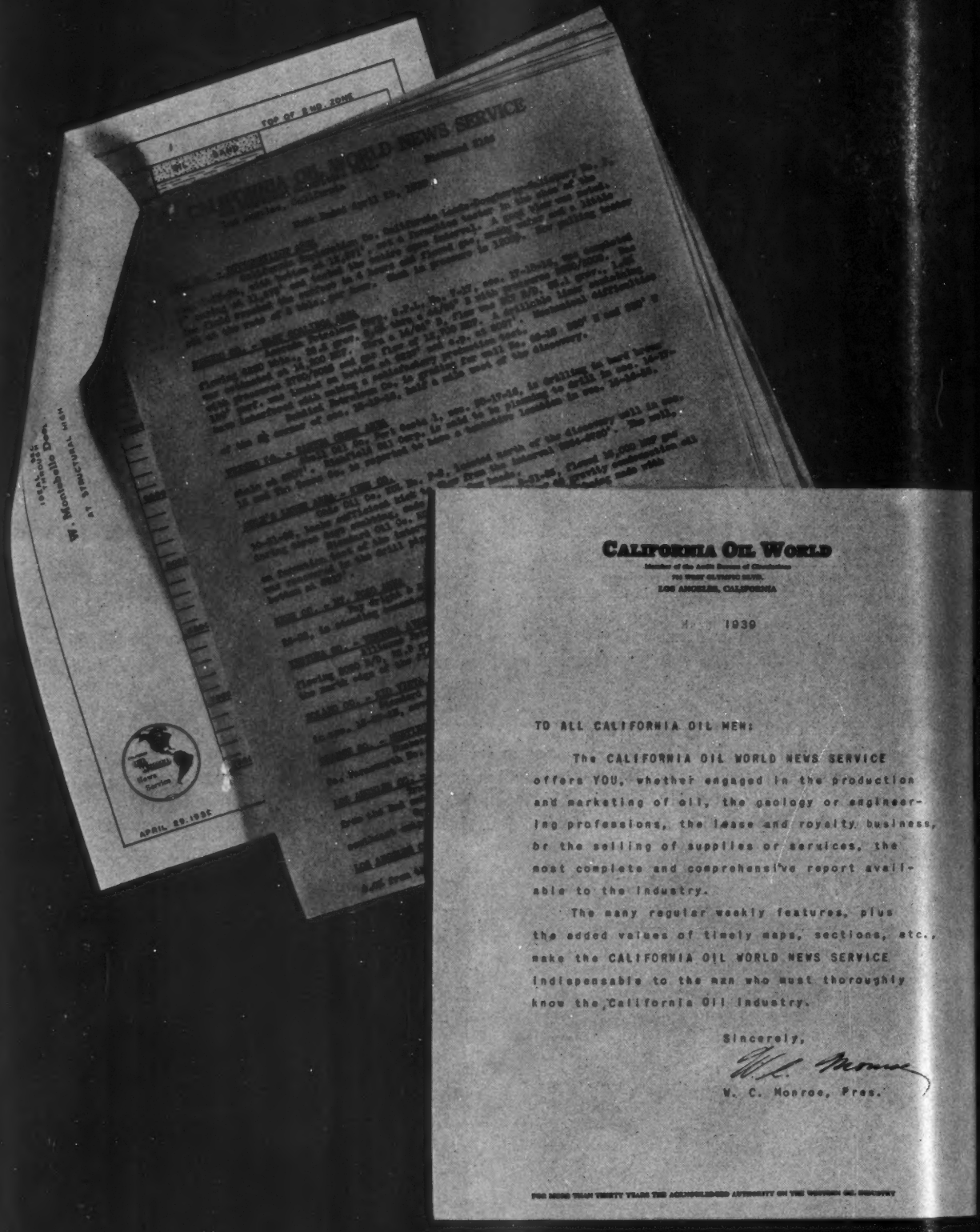
R. W. (Rockey) Jerman who is president of both De Soto and Dormax is pleased with the performance of his new "baby" and is formulating plans for larger scale development of the deep sands. Sharing with Mr. Jerman the credit for pioneering at 10,000 ft. are many Signal Hill operators and supplymen who have cooperated in countless ways to help prove the discovery well was no freak.

Like most major booms, this one started slowly but is now definitely under way. When delayed by a stubborn fishing job, Jack Rogers' El Hondo No. 1 was on the point of setting casing at 9700 ft. to make a flow test with the hole open to bottom at 10,056 ft. This well will prove deep production to extend westerly to the intersection of Spring St. and Long Beach Blvd.

Offsetting De Soto No. 1 to the west, Allied Petroleum Corp. is set-

Illustrated here is the clear floor space obtained by the use of the rotary table drive unit. Driller W. E. Hilborn and his crew of J. E. Hilborn, J. S. Mankin, J. W. Witt and F. M. Olsen are making up drill pipe.

Completing a well can sometimes be a messy proposition, but when success means the starting of a new boom in the world's greatest oil field, who cares? Note the Regan head ready for action if the deep zone proves troublesome.



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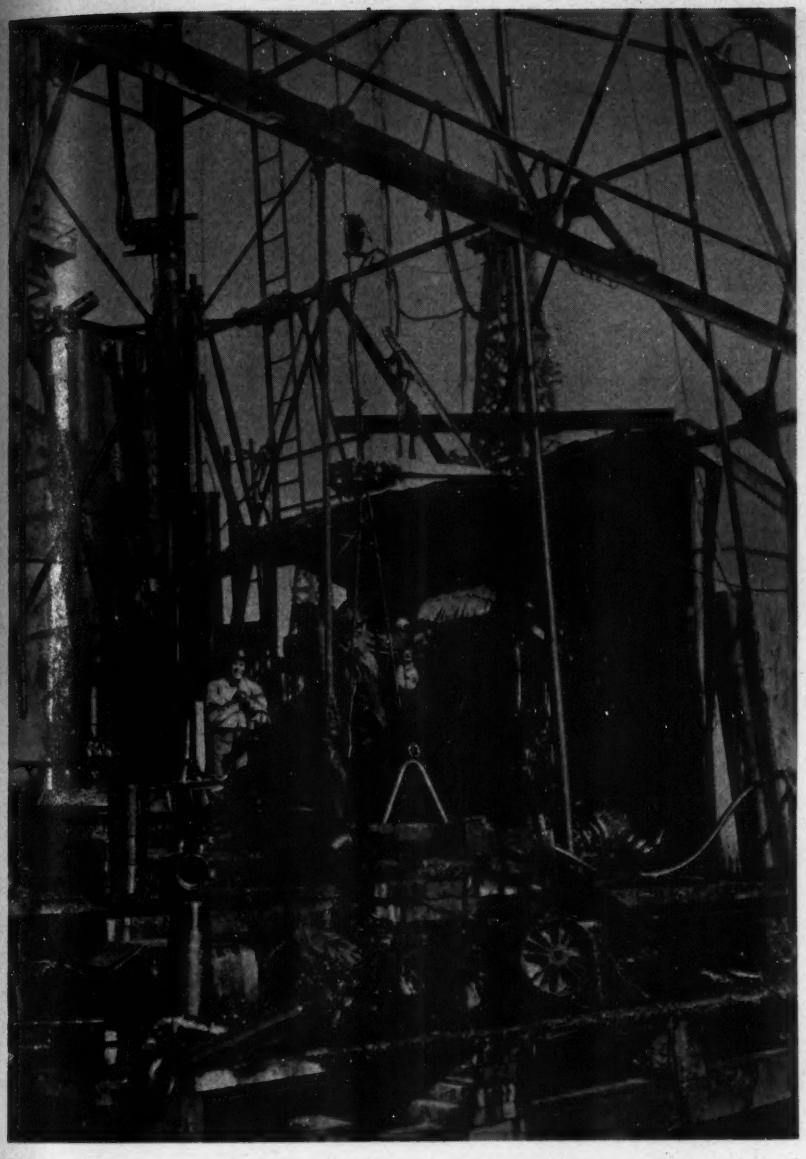

A top-notch stand-by unit is essential in deep well drilling. The one used on Dormax No. 1 mounted the sand reel above the deadline drum and proved its efficiency while running single shot surveys and while swabbing.

ting protection casing at 4350 ft. before continuing to the deep sand. Allied plans to penetrate more zone than its neighbor.

John McKeon expects to drill a deep hole under the cemetery shortly after the turn of the year and many other operators have tentative plans for deep wells. In all probability offset clauses will force drilling in some cases.

A strange phenomenon which always accompanies a new zone discovery is a notable increase in reconditioning work and the starting of new wells to old horizons. No important work had been done in years in the old Coalinga fields until the Eocene discovery, then many new wells and redrill jobs were started, the work yet continuing after 18 months.

The same is true in the Long Beach-Signal Hill field where a number of old projects are being reconditioned and several new wells are drilling to the shallow zones. In the Willow and California St. area, John McKeon and Atlantic Oil Co.

(Continued on Page 22)

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Howard Production Crowns
Howard Pumping Units
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Kropp Forged Flanges, Welding Nozzles
Link-Belt Rotary Chain, Mud Screens
Manhattan Mechanical Rubber Hose—Rotary Hose
Marsh Gauges
Mills Bull Plugs, Swage Nipples
Norris Sucker Rods
Perfection Thread Lubricant
Plant Packings
Ratigan Production Equipment
Raybould Couplings
Red Devil, Valves, Liners, Pump Parts
Reed Bits—Tool Joints
Republic Casing and Tubing
Republic Line Pipe
Republic Merchant's Pipe
Rex Pre-Heaters
Skinner Stuffing Boxes
Stockham Pipe Fittings
Thompson Shale Shaker
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C. N. G. A. Holds Plant Operators Night

It was plant operators night at the December regular monthly meeting of the California Natural Gasoline Association, Dec. 7, in Los Angeles.

A program designed to appeal particularly to plant operators was arranged. John Rogers, of Ingersoll-Rand Co. read a paper on "Application of the Cathode-Ray Oscillograph in Indicating Engine and Compressor Operation." Eliminating the inertia limitations of the usual mechanical indicator, particularly as applied to high speed operations, the oscillograph employs an electrical principle to show the phenomenon occurring in the cylinders continuously on the screen of a cathode-ray tube. Its sensitivity and instantaneous action make it applicable to the obtaining of detailed analyses of detonation, pressure pulsation and mechanical vibration. Mr. Rogers is known for his wide experience in this field and for his ability to present a subject in an interesting and understandable manner. The discussion of this paper was conducted by T. A. Dunlap of the Standard Oil Co. of California, chairman of the C. N. G. A. Gas Engine and Compressor Committee.

Feature No. 2 was a motion picture: "European Travelogue," by Paul Daniel of the Daniel Orifice Fitting Co. This picture shows scenes obtained by Mr. Daniel during a European tour in April, May, June and July of this year which took him through the British Isles, France, Italy, Holland and Germany.

This is a highly interesting picture and is of historical interest because it was obtained just shortly before the beginning of the present war.

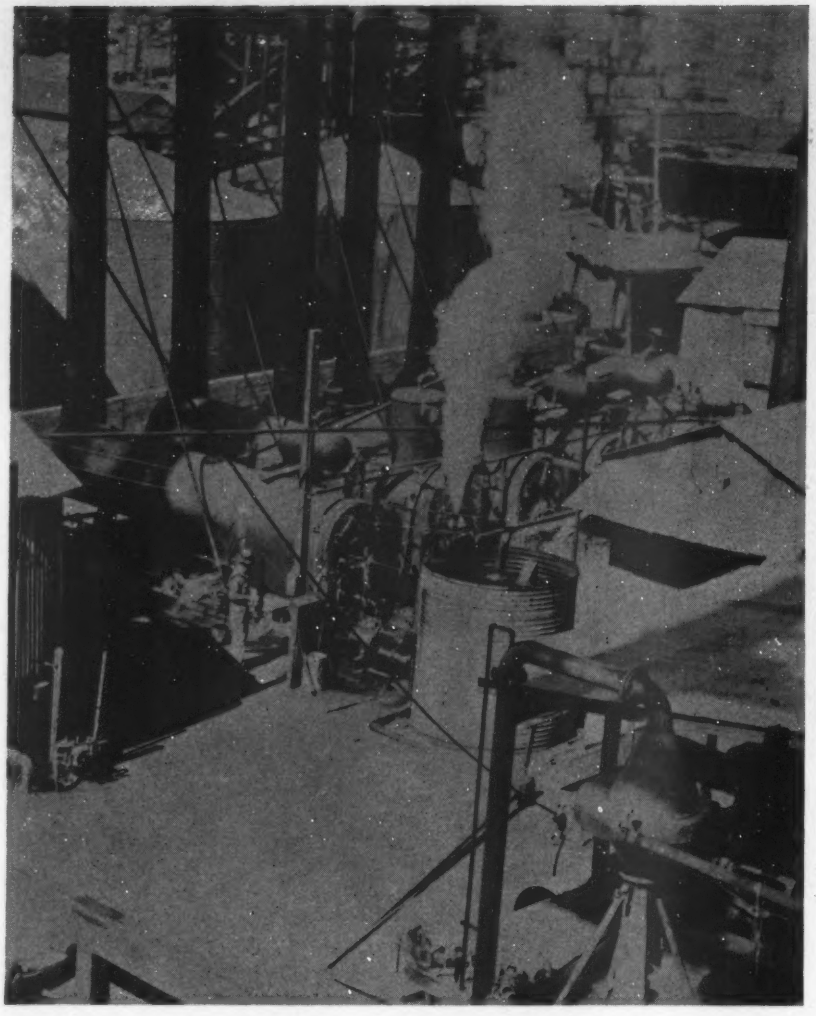
A. S. M. E. Meeting Dec. 14 at Barkers

Two interesting papers are to be presented at the regular monthly meeting of the American Society of Mechanical Engineers, Los Angeles Section, Dec. 14, at 6:30 p.m. at the Mary Louise Tea Room, Barker Bros.

Corrosion and its Causes, by Guy Corfield, Research Engineer of the Southern California Gas Co. Mr. Corfield is a graduate Chemical Engineer from the University of British Columbia at Vancouver, Canada. He has been actively engaged in the study and prevention of corrosion since 1924. His talk will cover the mechanism of corrosion, why pipe corrodes in contact with the earth, the different kinds of earth encountered in this area, the influence of soil moisture and texture, how the corrosiveness of the soil can be predetermined by tests. All this and more will be discussed by Mr. Corfield.

Cathodic Protection, by Gordon N. Scott, Ph. D., Consulting Engineer, Los Angeles. Cathodic protection is the fascinating new preventative for corrosion. Simply expressed, whenever an electrical current discharges from a metal into a solution surrounding the metal, you have a loss of metal. Reverse this and make the current flow from the solution to the pipe and you will prevent the corrosion and protect the pipe, con-

(Continued on Page 38)



A new type of mud de-sander was successfully used by Dormax. (lower right). Limited space called for much crowding of the big equipment necessary to drill deep in the hard formations of Signal Hill.

(Continued from Page 19)

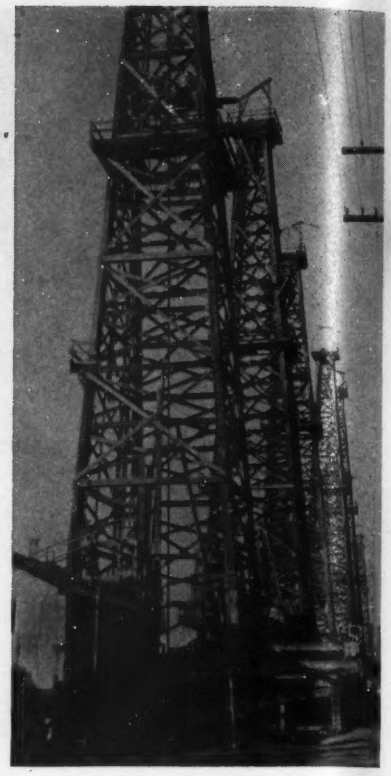
are completing wells above 3500 ft. while J. P. Massey is finishing his No. 2 in the 29th and Walnut sector at 4900 ft. At the foot of the Long Beach Blvd. hill, A. S. (Sid) Johnston is preparing to bring in his No. 39. Richfield Oil Corp. completed its Long Beach City No. B-8 on Reservoir Hill at 4940 ft.

Federal Order Revises Oil Prospecting Leases

Oil and gas prospectors on the public domain henceforth may pay an annual rental in lieu of posting the $1000 bond heretofore required as a condition to the granting of a federal lease, Secretary of the Interior Ickes ruled on December 2. Officials said that rentals would be assessed at 50 cents an acre for the first year and 25 cents thereafter, and average from $10 to $640 to the lease. They added, however, that the new regulations did not relieve the lessee from obligation to post a $5,000 general lease bond prior to drilling operations, and that the regulations did not apply in cases where there were surface owners or claimants under the agricultural law, since that law requires that oil prospectors provide a $1000 bond as protection against damage to crops and improvements.

New Potential Method Adopted in California

Representing an advancement in procedure which is expected to contribute to uniformity under the state's present self-managed curtailment program, the Central Committee of California Oil Producers has adopted a new method of testing oil well capacities. The new method embraces a technical study of sub-surface pressure data, evaluation of which provides for the finding of a well's productive capacity with surprising accuracy, and eliminates the necessity for open flow demonstrations. This minimizes the piling up of excess oil, reduces sub-surface waste, and contributes to the conservation of reservoir energy. It is estimated that of 19,000 wells in California, only about 3,000 will be subject to study under the new method, practically all of which are in the production brackets of more than 100 barrels daily.



Dormax' cross town rival for deep honors, El Hondo Petroleum Co.'s Venago No. 1, is one of the world's deepest wells drilled with a wood derrick. With bottom at 10,056 ft., preparations are being made to left hand out a drill pipe fish.

California Oil World is pleased to announce a series of articles by Wallace A. Sawdon, the first of which will be published in January. Mr. Sawdon needs no introduction to the California oil industry where he has long been active as a petroleum engineer and writer. He also has visited most of the South American oil fields and has first-hand knowledge of operations in various countries.

While continuing his engineering work, Mr. Sawdon is enlarging the scope of his writing activities and his long and close association with the petroleum industry in California will enable the California Oil World to give its readers more articles on latest engineering practices in the domestic and foreign fields.

Field Development

San Joaquin Valley

Strand Deep Test Nears Abandonment

Continental Oil Co.'s deep Strand Test, KCL No. D-2, is unable to recover drill pipe stuck during a formation test of Olcese showings encountered from 11,600 to 11,700 ft. This well, located in sec. 14, 30-25, was drilled to a bottom of 14,051 ft. to establish a record as the third deepest drilled hole in the world. The showings, whose test was in progress at the time of misfortune, were the main encouragement in the deep hole located some four and a half miles west of Canal Field production.

Richfield Spuds 10 Section Outpost

Taking a great southward step from established Ten Section production, Richfield Oil Corp. has spudded James Slough-KCL No. 1 near the west quarter corner of sec. 6, 31-26. Lying southerly from Ten Section and easterly from Cole's Levee, the well should throw much light on the productive limits of each field. Depth was last reported from the well as 3546 ft. at which point the well is a mere beginner.

Fading Hopes Mark B. V. Lake Deep Trys

With two of the Buena Vista Lake deep tests running in hard mechanical luck and the third continuing what appears to be a fruitless search for oil, the prospect for Stevens zone production in this area seems questionable.

General Petroleum Corp.'s B. V. A. No. 1, located at the foot of the Buena Vista Hills in sec. 1, 32-24, is bottomed at 10,614 ft. in brown shale while fishing for drill pipe stuck at 3443 ft. This well encountered thin streaks of sand showing slight cuts at 10,560 ft. and while not officially announced it is suspected that the unpromising sand is the Stevens zone.

At the easterly edge of the lake in sec. 36, 31-25, Richfield Oil Corp. is drilling B.V.A. No. 81-36 below 10,600 ft.

SAN JOAQUIN VALLEY WILDCATS

Area	Well	No.	Section	Depth	Status
Coalinga	Coalinga Pacific Oil Co., P.S.A.	7	6, 21-15		Location
	Lewis, C. H.	1	18, 21-15	366	Drilling
	Rylatt, Harry E., Kipling	3	26, 20-14	2010	Idle
	Wilshire Annex Oil Co.	64–30B	30, 19-16	8383	Suspended
Gatos Creek	Gatos Creek Oil Co.	1	19, 19-13	466	Idle
Mendota	Jergins Oil Co., Cheney Ranch	1	29, 14-13	3138	Drilling
	Kern County				
Antelope	Par Petroleum Co.	1	32, 25-17	3032	Idle
Buena Vista	Gen. Pet. Corp., B.V.A.	1	1, 32-24	10614	Fishing
	Richfield Oil Corp., B.V.A.	81–36	36, 31-25	10642	Drilling
	Shell Oil Co., B.V.A.	45–9	9, 32-25	9886	Redrilling
Buttonwillow	Union Oil Co., Bowerbank	4–23	23, 29-24	11516	Drilling
Devil's Den	Herzog, Raymond D.	1	27, 25-18	710	Cleaning out
Edison	El Tejon Oil & Ref. Corp., Douglas	1	32, 29-29	4100	Abandoning
	Mayes, A. S.	1	5, 30-29	4222	Idle
	O'Rielly, Francis, Edison-Land	2	5, 30-29	4103	Idle
Fruitvale	Richfield Oil Corp., KCL	83–29	29, 29-27	4400	Producing
Kern Front	Davis Petroleum Co.	1	13, 28-27	335	Cleaning out
Kern River	Sleeper Ridge Oil Co.	1	15, 29-28	1797	Idle
McKittrick	Burt & Taylor, Taylor	1	30, 30-22	1047	Idle
	Calstan Pet. Co., Webber	1	34, 30-22	643	Drilling
	Fairfield, F. E., Williams	2	2, 30-21	1530	Idle
	Fairfield, F. E., Ninkovitch	1	4, 30-21	1711	Abandoned
	Trico Oil & Gas Co., Westco	2	34, 30-22	1500	Abandoned
Mt. Poso	The Caminol Co., Poso	1–18	24, 26-27	2218	Abandoned
Panorama Hills	Burrhus, V. E.	2	31, 31-22		Grade
Richgrove	Crusaders Pet. Corp., Quinn	1	9, 25-27	3140	Idle
	Dilamar Oil Corp., Quinn	3	15, 25-27	2902	Idle
San Emigdio	Continental Oil Co.	KCL F-1	5, 10-21	10236	Drilling
	Shell Oil Co.	KCL 2A 52–13	13, 11-22	12370	Drilling
Shale Hills	Gamble & Oliver, Abbott	1	7, 27-19	1210	Drilling
	The Texas Co., McD-Theta	1	12, 28-19		Rig
Strand	Continental Oil Co.	KCL D-2	14, 30-36	14051	Abandoning
Ten Section	Richfield Oil Corp., James-Slough	KCL 1	6, 31-26	3546	Drilling
	Kings County				
Reef Ridge	Chuka Oil Co.	2A	10, 23-16	185	Drilling
W. Tulare Lake	Shell Oil Co., Cohn Estate	6–4	4, 22-19		Rig
Strattford	P. W. Burnham & Assoc., Bartells	1	23, 20-20		Rig
Trico	Pacific Oil & Gas Dev. Co.	1	7, 25-24		Location
	Tulare County				
Pixley	Compass Oil Co.	1	8, 23-26	4322	Abandoned
	Standard Oil Co., Bryson	1	28, 24-23		Location
	Trico Oil & Gas Co., Tulare Farms	2	27, 24-23	2439	Drilling

in hard shale after recovering only water from a formation test at 10,451 ft. This well, however, has the advantage of having established commercial gas production from the Etchegoin near 5500 ft. and may soon be converted to a gas producing unit of the Buena Vista Lake Gas field.

At the south edge of the lake, in sec. 9,32-25, Shell Oil Co. is redrilling B.V.A. No. 45-9 at 7162 ft. after losing a 9886 ft. hole due to caving formations. This driller tenders some measure of hope because of having encountered the chert approximately 500 ft. higher than in the Richfield try, and since chert overlays the Stevens, this conceivably could indicate that the zone may be found productive at this point.

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Richfield Oil Corp. Continues Lease Tests

Continuing tests on the 55,000-acre lease recently acquired in the lower San Joaquin Valley, Richfield Oil Corp. is drilling Coreholes Nos. 3 and 4. Due to the size of the area under lease, the exploration efforts are expected to continue for some time.

Pixley Test Now Abandoned

Compass Oil Co.'s test of the Pixley Area has been abandoned in Schist at 4322 ft. Located in sec. 8, 32-26, just south of Pixley and 5 miles east of the Golden State Highway, the test is the third within a small area to terminate at approximately the same unproductive level.

Northern California Wildcat Abandoned

Howard No. 1, a joint test drilled by Seaboard, Tide Water Associated and Union Oil Cos. in the Los Banos area of Merced County, has been abandoned. Located near the westerly limits of the county, in sec. 6, 8s-11e, the well was taken to 7074 ft. for the first deep test of the general area.

Shell Oil Co. to Test West Tulare Lake Area

Shell Oil Co. has erected rig for Cohn Estate No. 6-4 on sec. 4, 22-19. The location is at the west edge of the Tulare Lake bed, some 5 miles northeast of Kettleman Hills. The activity is of especial interest to those who for so long have hoped to see another test of this district.

N. E. Coalinga Gets New Production

Adding materially to proved reserves and potentials of the Coalinga Northeast Field in Fresno County, two wells have been completed flowing from the rich Gatchell oil sand.

Amerada Petroleum Corp., discoverer of the shore line oil deposit, has added S.P.L. No. 3-17 to it's already impressive production in the discovery sec. 17,19-16. Completed flowing through a 17/64 in. bean, the well established a 1248 bbl. rate on a 6 hour gauge. The clean 28 gravity oil was from 50 ft. of zone bottomed at 8206 ft.

The other addition was Superior Oil Co.'s Husong No. 1 on the adjoining section 18. This well, first in the field by this company, came in flowing 2736 bbl. rate clean, 27 gravity oil through a 44/64 in. bean along with 7,737,000 cu. ft. of gas.

Next probable completion will be Union Oil Co.'s Cook No. 57-18 in sec. 18,19-16. While bottomed at 8085 ft. in the gas sand which caps the Gatchell at this point. Water string has been set at 8055 ft. and it appears merely a matter of mechanics until another well is added to the producing list.

With 8 completed wells to its credit and 8 more in process or drilling, this field is assuming a place of importance in the San Joaquin Valley oil picture.

Buttonwillow Test Cores Gray Sand

Union Oil Co.'s test of the Buttonwillow area is coring gray sand and streaks of brown shale showing light cuts at 11,516 ft. Located in sec. 23, 29-24, the well has been exploring the lower horizons to determine if better showings might not be found than were cored in California Exploration Co.'s abandoned 12,989 ft. hole drilled some 4 miles northwest of the present try.

While Stevens oil sand was cored from 10,776 to 10,845 ft. the character of the sand was identical to the tightly packed, impermeable zones encountered in the abandoned hole.

Burnoel Plans Lokern Wildcat

Burnoel Petroleum Co. has acquired more than 1200 acres in the Lokern area lying between Belridge and Buttonwillow in townships 28-22, 29-22 and 29-23.

Extensive development is planned by the company and reports indicate that a deep test will start shortly after the first of the year.

Two shallow tests have been made in this area, both in sec. 18,28-22; one by the Zurich Oil Co. in 1926, and the other three years later by the Keystone Petroleum Co. The latter having a gas blowout from around 3100 ft. in the Etchegoin.

Burnoel believes that Lost Hills and Belridge zones may be found at Lokern probably at greater depths than at North Belridge due to a thickening of sediments towards the east.

Among those reported holding property in the general area are, Standard, Universal Consolidated, Honolulu, Shell and Tide Water Associated Oil companies.

Hogan Abandons Mt. View "Cat"

Hogan Petroleum Co. has abandoned it's Mountain View outpost try, Wible No. 1. The well was located near the southwest corner of sec. 23,30-28, some two miles west of the main producing area. Drilled to 6619 ft. in an effort to find an oil accumulation along one of the many faults known to exist in the district, the well cored oil showings which tests proved to be non-productive.

Standard Extends Greeley Limits

Standard Oil Co.'s Ross No. 1, deepened from a previously abandoned depth of 8110 ft. to 11,524 ft., has moved the known productive limits of the Greeley Field one quarter of a mile southeast. Located in the southeast quarter of sec. 20,29-26, the well was abandoned in 1938 after finding the Greeley sand barren. With the advent of deep production in the field, deepening operations were started in the middle of 1939. Top of the Rio Bravo zone was found near 11,500 ft. with the top of the productive Vedder sand encountered 20 ft. below. With 26 ft. of zone open the well was completed flowing 300 bbl. rate through a 13/64 in. bean. The oil was above 35 gravity and was accompanied by a 1,-500,000 cu. ft. gas flow.

El Tejon O. & R. Abandons Test

Finding the 4000 ft. zone barren, El Tejon Oil Refining Corp. has abandoned Douglas No. 1. Located north and east of the recently completed Petrex well, at the south quarter corner of the southwest quarter of sec. 32,29-29 in the Edison area, the well was drilled to 4100 ft. where a production test recovered only water with a trace of oil.

Across the section line, in sec. 5,30-29, Francis O'Rielly's Edison-Land No. 2 is idle after pumping water from 4103 ft.

A quarter of a mile southwest A. S. Mayes well No. 1 is idle after building a new rig over an old 4222 ft. hole formerly known as W. W. Fisher and H. R. Shaffler No. 1.

Richfield Completes Fruitvale Outpost

Richfield Oil Corp. has completed a small pumper in a fault accumulation a half mile southwest of the Fruitvale Field. The well, KCL No. 83-29, is located in sec. 29,29-27 between an abandoned well, drilled by the Shell Oil Co. to 7214 ft., and the main body of the field. Bottomed at 4400 ft. in the Kernco zone, the well was completed pumping 127 bbls. daily of clean 23 gravity oil.

McDonald & Dearin Active at Kern Front

Lone active operators in the Kern Front area, McDonald and Dearin are testing water shut off on a 10¾ in. string cemented in their 2245 ft. hole, Movius No. 3. Located in sec. 10,28-27, the test lies at the northwest flank of the Kern Front field and successful completion could cause further drilling between Kern Front and the Premier field.

Ring Completes Mt. Poso Well

Ring Oil Co. has completed Bohen No. 5 pumping 500 bbls. daily of 15.5 gravity oil cutting only 2.0%. The well, located in sec. 32,26-28, is bottomed at 1665 ft. and is producing from 30 ft. of Vedder sand.

In the southeast quarter of section 20, Crestmont Oil Co. completed Buchner No. 2 pumping 14.5 gravity oil at a 35 bbl. rate from 20 ft. of Vedder sand.

Universal Cores Eocene Siltstone

Universal Consolidated Oil Co. is coring siltstone at 7584 ft. after having encountered the Green Sand marker which identifies the proximity of the Gatchell sands. Located near the northeast corner of sec. 24,20-15, the well is near field production and yet is in the section where E. A. Parkford drilled a dry 8243 ft. hole. The Parkford try, near the center of the section, found the Gatchell barren with only the top fingers showing light cuts. With the present try but one location southwest of production and the correlations favorable, the Universal well should soon core the oil sand.

Standard Abandons Coalinga Outpost

Standard Oil Co.'s well No. 62-13C, located near the center of the northeast quarter of sec. 13,20-15 at the westerly Eocene Pool limits, is being abandoned with bottom at 7472 ft. The well proved to be west of the old shore line and after a fruitless test of Arroyo Hondo showings encountered in the lower Eocene horizon below 7250 ft. the project was abandoned.

Eleven strings are running in the Eocene Pool and are gradually determining the limits of this enigmatic Eocene shoreline deposit. Since the nature of the accumulation prohibits the forecasting of natural boundaries, the final limits will be determined over a long drilling program.

Kettleman Test Shows Gas Kick

Recalling the days of high gas pressures in the early days of Kettleman Hills, Standard Oil Co.'s well 27-7Q tried to blow out while pulling drill pipe from 9600 ft. With the drill in light oil sand showing a great deal of promise, the well is doubly important since it has found the Eocene oil sand higher structurally than any well in the field.

With the presence and quality of the deep sand well established by Eocene completions at the north tip of the field, this location on top structure in the center of the field should have much thicker sands with an abundant gas cap.

Christmas Jinks Announcement Out

Announcements for the Wildcat Christmas Jinks of the California Oil and Gas Association were mailed on Dec. 4. The speedy response to the announcement in the form of ticket reservations indicates that this annual colossal of the oil industry will break all records for attendance, and the plans now being completed assure that it will break records for quality and abundance of entertainment and "good, clean fun".

Lane-Wells Increases Employe Insurance Scope

A new group insurance plan affording wide benefits against sickness, disability, accident and death, has just been put in effect covering all employes of Lane-Wells Co. who have completed three months or more of service, according to an announcement made today by Rodney S. Durkee, president. The company pays a substantial portion of the cost of the insurance which is underwritten by The Travelers Insurance Co. In addition, employes can buy more insurance up to certain amounts based on the period of employment and monthly earnings.

Los Angeles Basin

E. Coyote Well Tests Lower Zones

Preparing to test its recently deepened Stern No. 1 is Bartholomae Oil Corp., original developers of the west end of East Coyote. An old producer, the well was re-entered and carried to 5350 ft. where casing was cemented and gun-perforated.

Across Brea-Fullerton Road from Bartholomae's elaborate new office, Union Oil Co. is drilling Hole No. 22 below 3500 ft.

Latest new well to be started is Standard Oil Co.'s Coyote No. 2-13 which will be spudded in before the end of the year.

Important Dominguez Extension Looming

The extension of Dominguez production west of Avalon Blvd. should be an accomplished fact by Christmas with Russell Havenstrite setting casing over the 7th Callender zone topped at 6940 ft. Good oil sand was cored throughout the 7th, but the 8th, entered at 7385 ft., gray sand below 7525 ft. The barren sand has been plugged off.

Offsetting the Havenstrite project to the east, Union Oil Co. is setting casing in Callender No. 73 while No. 74, located to the north is testing for production after plugging bottom from 7636 ft. to 7117 ft. The water string is cemented at 6875 ft.

During the past year the march of derricks has been steadily westward on Union Oil Co.'s Callender property and now has reached the point where an independent operator will share in the prolific extension.

In the central section of the field, Shell Oil Co. is reconditioning No. 36, an old well, and is drilling No. 100 at 7600 ft. Preliminary grading is being done for No. 102.

Ed McAdams Starts Huntington Outpost

Returning to California from his operations in Texas fields, Ed McAdams built a derrick to drill an outpost well on the flat east of the main Huntington Beach field. Site of the well is close to the old Standard Oil Co. Farnsworth No. 4 which is now being tested by H & T Oil Co. Recovery from a 200 ft. interval open to bottom at 3650 ft. has so far been only water. Two other zones are believed to offer good possibilities for a new well.

In the tiny Five Points field, Mrs. Sara Orr has made all the necessary hole and is preparing to set casing.

Plugged to 3500 ft., South Basin's No. 93 is redrilling with the expectation of carrying on as a deep test. In the same section of the old field, Alabama Street Oil Co. is reported to be pumping about 40 bbls. day from the 2750 ft. zone.

Seal Beach Schedules Three New Oil Wells

Three new wells are scheduled for the east end of the Seal Beach field where some weeks ago the Hellman Estate recompleted an old well flowing 1000 bbls. a day. Continental Oil Co. is rigging Bixby No. 42, Asphalt Petroleum Co. has derrick up and Tide Water Associated Oil Co. is grading for Bryant No. 7.

Drilling Pace Even In West Montebello

Drilling and completion rates remain approximately even in the West Montebello field with 13 new wells on production and 31 projects drilling since our last issue compared to 14 and 30, respectively, for the previous like period. That the rate cannot continue is seen in the fact that fewer wells are preparing to start now than at any time since the discovery of the Eighth zone last spring.

Some excitement was occasioned when L. G. Larsen Drilling Co. let it be understood that it had found the Eighth zone barren and that its well would deepen in search of a ninth. However, the upper Eighth turned out to be good, and will soon be on production. Like all wells in low structural positions, the lower portion of the zone is wet.

Further proving the extreme west end, The Caminol Co. obtained a 500 bbl. well in No. 3-17, located at the southeast corner of Beverly Blvd. and Wilcox Ave. The Texas Co. is drilling two outposts on Wilcox property and Aviation Petroleum Co. is preparing to put down a semi-wildcat on the island in

LOS ANGELES BASIN WILDCATS

Area	Well	No.	Section	Depth	Status
Athens	Melrose Pet. Co.	1	12, 3-14		Rig
Castaic	Worland, C. C., Jenkins-Owens	1	18, 5-16		Grading roads
Chatsworth	Fernando Oils, Ltd., Holmes	1	18, 2-16		Grade
Dominguez	R. E. Havenstrite, Operator	1	32, 3-13	7543	Plugging
Inglewood	Vanguard Oil Co., L.A.I.	1	29, 2-14		Rig
Mint Canyon	Redwood Oil Co., Mitchell	2	22, 4-15	525	Idle
Newhall	Mangrum and Page, Lintz	1	4, 3-15	828	Idle
	Consolidated Pet. Co., Needham	4	13, 3-16	3930	Drilling
	Tamas Oil Co., Perkins	1	11, 3-16	3700	Drilling
Palos Verdes	Rolling Hills Pet.	1	27, 4-14	6550	Idle
Potrero Heights	Owen O Oil Co.	1	36, 1-12		Cellar
Puente	Kelso, F. W., Kelso	1	13, 2-10	2380	Idle
	Stabeck & Assoc.	1	14, 2-10		Rig
Sunland	Casa Grande Oil Co.,Lopez-Lundy	1	1, 2-15	2218	Fishing swab
West Whittier	West Whittier Oil Co., Pellissier	1	17, 2-11		Rigging up
Whittier	C. W. Partridge, Hillside	1	22, 2-11	1780	Idle
	Orange County				
Costa Mesa	Thompson, Milton N. Banning	1	9, 6-10	1700	Idle
Santa Ana	Gen. Pet. Corp., Was	1	21, 5-10		Rig
Yorba Linda	Morgan, George Fricke	1	21, 3-9	1150	Drilling
	San Bernardino				
Carbon Canyon	Carbon Canyon Oil Co.	1	30, 2-8	256	Idle
	Hokom, John, Oil & Gas Co., Ltd., Hokom	1	31, 2-8	2941	Idle

NORTHERN COUNTIES WILDCATS

County	Well	No.	Section	Depth	Status
Contra Costa	Tassajara Oil Corp.	1	9, 2s-1e	4388	Drilling
Merced	Seaboard-TWA-Union, Howard	1	6, 8s-11e	7074	Abandoned
Monterey	Loma Grande Oil Co., Corey	1	23, 24s-10e		Location
	Priest Valley Pet. Co., Greve	1	22, 20s-12e	1686	Drilling
Sacramento	The Texas Co., Welsh	1	5, 3n-3e	4300	Completed
San Benito	Consolidated Pet. Co.	1	11, 17s-11e	2120	Idle
Solano	Richfield Oil Corp., Potrero Hills	2	5, 4n-1w		Location
Sutter	Buttes Oilfields, Inc., McPherrin	6	1, 15n-1e	6471	Drilling

Beverly Blvd. occupied by the old real estate lecture hall.

Many of the current drillers are approaching completion and unless the Ninth zone becomes a reality in the near future, there will be sharp drop in activity by the time the field celebrates the second anniversary of the deep zone discovery by St. Helens Petroleum Co. (now Kern Oil Co.) Monterey No. 20 the first week of January.

South Rosecrans Activity Increases

Activity in the southerly Rosecrans extension is now at its highest point with five wells actually drilling and many more planned. Most interesting of the group is Dr. Geo. Averill's No. 3, which recently was resurrected from the abandoned list and deepened to 8400 ft. Cores are said to have contained a high percentage of good oil sand and casing is standing recemented at approximately 8075 ft. A production test will probably be under way when this is read.

East of its first joint extension try with Wilshire Oil Co., Barnsdall Oil Co. is drilling Santa Fe No. 1 in shale streaked with oil sand at 8750 ft.

Offsetting its 800 bbl. Slabaugh No. 1, Southern California Petroleum Corp. is drilling its Rowena No. 1 near the 2000 ft. level, while to the south, Thomas Kelly & Sons, Inc., No. 1 is below 5500 ft.

On the strength of Averill No. 3, Apex Petroleum Corp. spudded in Hatfield No. 1 and is drilling at 1850 ft.

Bren Oil Finds Basement Barren

Discouraging hopes of basement production in the Torrance field, Bren Oil Co.'s Stephens-Woodman No. 1 located west of Main St. between Sepulveda and Lomita Blvds., bottomed in barren conglomerate at approximately 6100 ft. and is planning to plug back and test showings at 5300 ft. and 4000 ft.

Royalty Service Drills To Wilmington Basement

Releasing no information on the way, Royalty Service Corp. is carrying Nelson No. B-7 to the schist basement at Wilmington. Located south of Anaheim and west of Ford Blvd., the well is very nearly on a line between General Petroleum Corp.'s discovery well, Terminal No. 1, which topped the basement at 6787 ft. and Tide Water Associated Oil Co.'s Banning No. 1 which struck schist at 6755 ft. Latest estimates place present depth near the 6500 ft. level.

Biggest news in the Long Beach harbor section is the starting of preliminary work for the drilling of the west bank of the county Flood Control Channel which forms the fields easterly boundary. Continental Corp., which has the property from the county, sub-contracted the drilling of the wells to Macson Oil Co. whose Wilmington record is above reproach. A field office is under construction on the property near the Seaside Blvd. bridge and within a few days a derrick will be up for an offset to O'Kane & Brain's wells now producing City of Long Beach property. Upwards of twenty wells will be drilled on the lease which covers the entire Channel from Anaheim Blvd. to the sea. Much legal red tape had to be disposed of by R. F. Ingold and Robert V. New, president and manager respectively of Continental Corp., before final clearance was obtained as the City of Long Beach endeavored to prevent Channel drilling.

In the area south of Anaheim and east of Santa Fe, J. M. Jackson Exploration Co. finished workman No. 1 at 3566 ft. producing 175 bbls. a day and derricks were built for several new wells. Simon Bernsteins outpost is flowing 115 bbls. a day.

G. P. & Associates Start Santa Ana Well

General Petroleum Corp. and several associated companies have started work on what promises to be one of the most important Basin wildcats in many months. Located south and west of Santa Ana in sec. 21,5-10, the well will test a geophysically located subsurface high. As many companies obtained lease in the play, it was decided to share the cost of the first well, derrick for which is up on the Frank J. Was property on Smeltzer Road. The hole will be carried to the "Basement" if no oil sands are encountered.

Production Test Trails On San Fernando Wildcat

A production test recently failed to recover more than a few oil colors from Casa Grande Oil Co.'s Lopez-Lundy No. 1, located in the mouth of Lopez Canyon near Sunland. With 100 ft. of hole open from the shoe of the water string to bottom at 2218 ft., the well was swabbed several days but only fresh water with a trace of oil entered. Cores below 2100 ft. contained streaks of hard gray oil stained sand.

Geo. Morgan Spuds Yorba Linda Project

First new well for the Yorba Linda area in more than a year is the project recently spudded by Geo. Morgan. Now below 1000 ft., the well is located in the northwest corner of lot 3 in sec. 21,3-9.

W. Whittier Company Starts Pellissier No. 1

West Whittier Oil Co. is getting under way with its important test of the Pellissier property located on Puente Mills Road in sec. 17,2-11. The well seeks to produce sands encountered by old wells in the vicinity.

Athens Area Now Inactive

Although leasing has been extremely active in the area west and northwest of the Athens field, Melrose Petroleum Co. has not started to rig up its derrick and no other company has announced drilling plans.

Worland to Drill Castaic Wildcat

Continuing the search for oil in the Castaic area, C. C. Worland is preparing to drill in sec. 18,5n-16w east of the Ridge road. The project, known as Jenkins-Owens No. 1, is situated in rugged terrain necessitating much road work. When all grading is completed, a standard derrick will be built and equipped with a No. 5 rotary.

In the adjoining section to the north, Ed. W. Lang works intermittently on his Rupy No. 1 which was last reported at 525 ft.

Four Wells Active In Newhall District

Four wells are at present active in the Newhall District. Said to have encountered fair oil showings, Tamas Oil Co.'s well in sec. 14-3-16 has received the most publicity of late. According to Superintendent Kitchen, bottom is in hard shale at 3700 ft.

On the Needham property to the east in sec. 13, Consolidated Petroleum Co. is drilling in very hard formation at 3930 ft.

Hazard Oil Co., working spasmodically on an old well in sec. 1, is making a production test after cementing 4¾ in. casing at 1030 ft.

Mangrum & Page, Long Beach tank men, are planning to test their Lintz No. 1 bottomed at 825 ft.

Rolling Hills Well To Test Conglomerate

The long awaited test of Rolling Hills Petroleum Co.'s Weston No. 1 is soon to be a reality according to E. C. McClaren, general superintendent. With the hole bottomed at 6550 ft., presumed to be the top of the schist, casing will be cemented at the top of the Conglomerate zone at 6450 ft.

Located near the big fault at the north end of the Palos Verdes Hills, the well encountered numerous oil showings but has never been tested for production. The forthcoming trial will be of formation said to be similar in appearance to that productive in the El Segundo field.

Coastal District

Rincon Well Flows 918 Bbls.

Flowing at an initial rate of 918 bbls. a day, Chanslor-Canfield Midway Oil Co. recompleted Hobson No. B-2 in the center of the Rincon field. Drilled originally to 4043 ft., the hole was deepened 17 ft., then plugged to 3815 ft. and 8⅝ in. casing cemented at 3813 ft. Following its usual proceedure in this field, C. C. M. O. gun-perforated the water string and finished the well with a pre-gravel-packed liner landed inside. Intervals perforated in this case were 3280-3315 and 3527-3580 ft. With a half-inch bean installed, the flow was 670 bbls. of 28.4 gravity oil and 288,000 cu. ft. of gas.

At the east end of the field, the company completed Hobson No. B-28 flowing 300 bbls. daily through a ½-inch bean. Mechanically finished like No. B-2, the well is open in the intervals 4082-4120 and 4170-4450 ft.

Believing in the possibilities of the field, C. C. M. O. Co. is preparing to drill wells No. B-30 and B-31.

In the neighboring San Miguelito field, C. C. M. O. is planning to drill a new well called Hobson No. A-9 in sec. 15, 3-24.

G. E. Development Acquires Hadley Wells

G. E. Development Co., headed by J. E. Logan of Los Angeles, has acquired the Hadley property in Hopper Canyon, sec. 13, 4-19. The new owner will recondition the several old wells on the lease and is drilling another with cable tools.

Santa Maria Well Nearing Completion

Nearing completion is Navy Oil Co.'s Jim O'Donnell No. 1 in the new "Hot Spot" of the Santa Maria Valley field. Located in the active section of the O'Donnell subdivision, once owned by the internationally renowned Ignace Paderewski, Navy's well is 5700 ft. deep with 8⅝ in. casing cemented at 5370 ft. Top of the Chert zone is placed at 5550 ft.

Three new projects, all in the same portion of the field, are scheduled for early drilling. Union Oil Co. is rigging up O'Donnell No. 2-5 and has staked location for No. 2-4 while Fred E. Cole of Santa Barbara is preparing to spud Paderewski No. 3.

This section has proved to be one of the most prolific in the entire field, recent completions gauging as high as 6000 bbls. a day.

Ventura Activity Hits New High Point

With drilling activity increasing steadily, the number of wells actually working in the Ventura Avenue field is at its highest point in years. Chiefly responsible for the rise was General Petroleum's Barnard No. 18 which was completed August 30, 1938 flowing 1600 bbls. a day from a 700 ft. interval open to 8410 ft. Other north side wells were started immediately and the play was given new impetus a month ago by the completion of California Alliance's Hartman Ranch No. 1 in the new Hisey Zone at 7555 ft. flowing 480 bbls. a day through 32/64 in. bean. Meanwhile, Ralph B. Lloyd brought in excellent production on the north flank of the east plunge, forcing offsets by Tide Water Associated Oil Co.

During the past fortnight, six wells have been completed; all but one with potentials of better than 1500 bbls. per day. Topping the list is Shell Oil Co. which added four wells, all on the Taylor lease. Initial yields ranged from 3600 bbls. in No. 106 to 630 bbls. in No. 64, a recompletion. Tide Water Associated Oil Co. finished two wells, Lloyd No. 121 and McGonigle No. 15, flowing 1750 and 1325 bbls. respectively.

Lloyd Corp. is testing wells Nos. 3 and 4 preparatory to completing.

Coastal Wildcat Progress Reported

Progress of coastal wildcats has been relatively uneventful during the past few weeks with interest largely cen-

COASTAL COUNTIES WILDCATS

Area	Well	No.	Section	Depth	Status
	Santa Barbara County				
Carpinteria	Sunset Oil Co.	1	32, 4-25	3413	Idle
Cuyama	Hearte, O. K.	1	11, 9-25	2405	Drilling
Goleta	Gen. Pet. Corp., More	5	22, 4-28	3664	Drilling
Lompoc	Sun-Bell Drilling Co.	1	28, 8-34	2982	Idle
Los Olivos	United Western Oil Co.	1	15, 7-30	3935	Cleaning out
San Marcos	Shell Oil Co., Barrett	1	13, 6-30	1440	Drilling
	San Luis Obispo County				
Elk Horn	Calif. Pet. Prod., Irons	1	19, 10-24	2510	Cleaning out
	Newton, S. M., Stafford	1	18, 31-21	5125	Idle
	Newton, S. M., Well	1	3, 32-21		Grade
	Burrhus, V. E.	1	8, 32-22	60	Idle
	Burrhus, V. E.	3	27, 32-22		Grade
Midway	Lee, H. E., Stewart	1	7, 32-22	2210	Idle
Paso Robles	Epco, Inc.	1	27, 26-13	6157	Idle
	Ventura County				
Conejo	Sulphur Springs Oil Co., Janss	1	33, 2-19		Rig
Moorpark	Shaffer, Frank, et. al.	1	30, 3-19	530	Drilling Portable
Ojai	Argo & Rynning, M & A	1	7, 4-21		Location
	Coronet Oil Co., Coronet	4	17, 4-21	827	Drilling
Santa Susana	K. C. Oil Co., Marr	1	32, 3-17	1014	Idle
Sespe	Nevada-Fortuna Oil Co.	1	13, 4-19		Rig
	G. E. Development Co.	7	13, 4-19	108	Drilling
	Renard Oil Co.	1	6, 4-19	998	Cleaning out
Shiells Canyon	Galveston Oil Co.	1	5, 3-19	3140	Idle
South Mountain	Albatross Oil Co., Schiefferle	1	17, 3-20		Rig
	Rilling, Harry	1	13, 3-21	3127	Producing
Tar Creek	Section 20 Oil Co.	1	20, 5-19	4157	Abandoned

tered on Shell Oil Co.'s attempt to find production at San Marcos. Located in sec. 13,6-30, Shell's Barrett No. 1 is seeking the shallow sands found dry in Richfield's three wells on leases adjoining to the east.

Considered a semi-wildcat is General Petroleum Corp.'s fifth well on the large More Ranch near Goleta. The new well, which is drilling below 3700 ft. in Temblor shale, hopes to find commercial oil production in a field where only gas has heretofore been developed.

A number of wells are now active in Ventura county, winter rains having failed to arrive to cause the usual shutdown because of impassable roads. In sec. 17,4-21 near Ojai, Cornet Oil Co. is drilling in oil sand at 825 ft. in well No. 4 at the edge of the old producing area. Frank Shaffer and Karl Lehndorfer are drilling in Saugus formations at 550 ft. in sec. 30,3-19 at the outskirts of Moorpark. Light portable equipment is being used. Renard Oil Co., operating in sec. 6,4-19, is having difficulty with a caving hole after drilling to 1000 ft. in Sespe formation.

Savage Oil Co., which recently acquired the Calumet property at Shiells Canyon, has No. 2 back on the pump at a 10 bbl. daily rate and is reconditioning No. 8, building a 132 ft. derrick to replace the small rig which burned. In the same field, The Texas Co. is spudding in Shiells No. 138, the only new project for several months.

With a perforated liner landed on bottom at 3127 ft., Harry Rilling completed his South Mountain well pumping 23 gravity oil at a 25 bbl. daily rate.

Marion Acquires Carreaga Project

John H. Marion, Huntington Beach, Rosecrans and Montebello operator, has taken over the old Arnold-Apache well on the Carreaga property south of the old Santa Maria field.

Northern California Wildcats Projected

Two wells of unusual interest have been announced in sections north of present production. Continuing its exploration in Northern California, The Texas Co. is preparing to drill Holmes-Eureka No. 1 in sec. 22,3-1, Humboldt County while in the Bradley area of Monterey County, Loma Grande Oil Co. is planning to drill Corey No. 1 in sec. 23,24-10. Both wells hope to find Miocene production.

Trans-Oceanic Spuds New Mesa Project

Trans-Oceanic Oil Co., only active operator in the Santa Barbara Mesa field is spudding M'Divani No. 5 on the Lowe property. The company's first four wells have found small but steady production in the Vaqueros sands at 1600 ft.

Patent Suit Decision Favors Sperry-Sun Claims

Patents covering Sperry-Sun Well Surveying Co.'s Surwell multiple shot surveying instrument were held valid and infringed upon in a recent decision by Judge Leon R. Yankwich of the U. S. District Court for Southern California. Defendant in the suit was Kepler Lutschg, who was found to have rebuilt a Surwell surveying instrument and used it infringing claims in the Bazzoni patent and the Williston and Nichols patent held by Sperry-Sun. The Judge points out that the instrument constructed by Sperry-Sun under these patents has been reduced to a very successful practice and that the claims are entitled to a broad interpretation. The judge found that the prior art did not show the combination of the essential elements of the patents involved.

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Marketing..... Manufacturing.....

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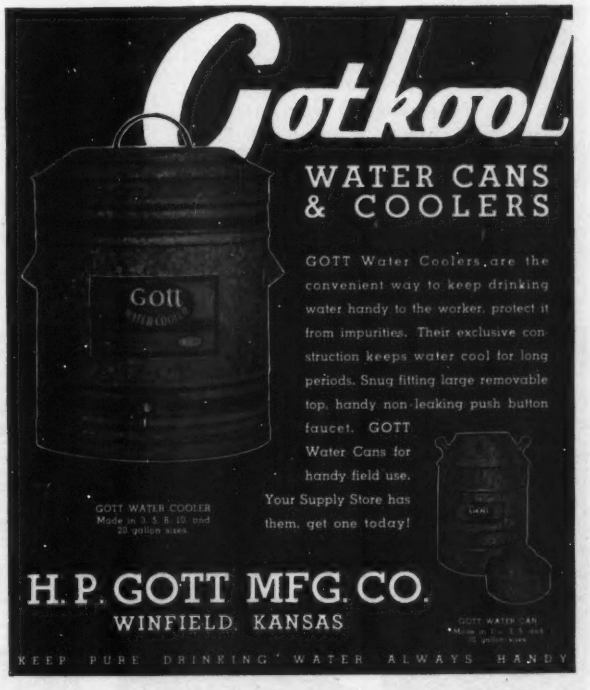
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WINFIELD, KANSAS
KEEP PURE DRINKING WATER ALWAYS HANDY

LAUGH THIS OFF

Now that the parties are actually selecting their candidates, **Joe Jensen** asserts that Charlie McCarthy ought to be good presidential timber.

Even if he is always out on a limb.

Which recalls the pompous superintendent who asked the foreman, "I suppose you know I'm running for office in the city council?" "Yeah," said the foreman, "I heard the boys laughing about it the other day."

And you may expect any minute to witness a revival of the old song "On a dew dew Dewey day."

Now comes a disturbing report via **Harry Rothschild** that the body of a well dressed young man was found out in the suburbs recently. He was thought to be an oil worker until they searched his pockets and found that he had four dollars in his possession.

Oil men are people who spend money like water, but never for it.

Bert Haney is our authority for the next piece of exciting news from the petrolic front line: A small refining company, not more than a hundred miles from Signal Hill, had a disastrous fire a short time ago, and a few days after received this significant note from the insurance company. "You took out an insurance policy on November 10 at 9 a.m., and the fire did not break out till 3 p.m. Will you kindly explain the delay."

And when the young lady student asked **Harold Hoots** if man was active on the earth at the same time as the brontosaurus, Harold promptly replied, "Well, if he was on the earth, he was certainly active."

"Well, we're going a lot smoother now," said **King Kohle** to the conductor on the suburban railway. "Yeah," says the conductor, "I guess we musta got off the track."

And when the salesman slapped himself on the chest and chortled, "Gee, I feel like a two year old," **Hal Halvorsen** remarked, "Yeah, mentally."

Which merely shows that he who dances must pay the fiddler—union wages.

The following wire was received by a Huntington Beach operator from a lessor up in the Valley, "Well expected in tomorrow morning. Send pipeline foreman, pumper, and gauger to lease immediately." A reply was dispatched at once reading, "Okay. He is on his way."

Mac McKinnon next brings an amazing story of a Scot who received an invitation to a civic banquet which was marked "gratis." He didn't know the meaning of the word so he passed it up. On the day following the dinner he was found dead beside an open dictionary.

By the way, now that the boys have all returned from the convention, golf scores are getting back to par.

Whereupon we repeat that old classic of the fairway:

There was once an oil man named Gunn
Who by chance made the third hole in one
He had sneaked off to play
So got fired the next day
When the papers all told what he'd done.

Bill Whiteford, on the other hand, has long wondered why this Gideon Association that puts a Bible in every hotel room doesn't also give one to the guy who fixes the hotel rates.

Also, we understand **Homer Law** had to give up golf when his niblick got overheated.

All of which brings us to the end of a remarkably instructive session. Remember, the futility of riches is taught very vividly both in the Bible and the income tax blank.

BAKER

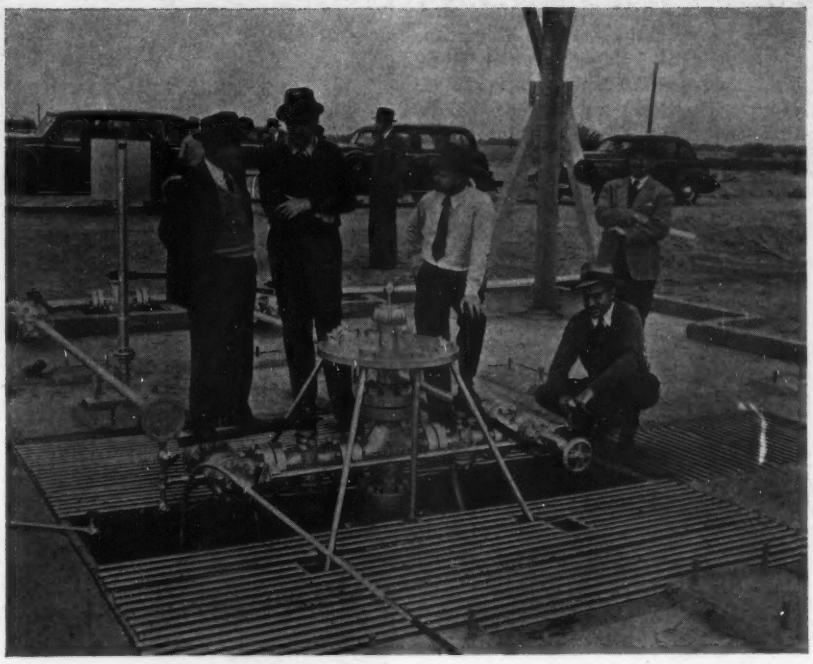
The Big Idea in Successfully Cementing Casing is to use equipment which provides in perfect balance the three important features of . . . STRENGTH, VALVE EFFICIENCY and DRILLABILITY.

Richfield Officials Inspect Oil Properties

Richfield Oil Corp. executives, headed by President Charles S. Jones, completed an inspection of all Richfield holdings in the San Joaquin Valley and Kern County oil fields. Ever since assuming the leadership in Richfield, Mr. Jones has made it a policy to inspect personally the properties of the company at regular intervals, including physical holdings, drilling activities, geological findings and exploration contemplations.

This is the first time, however, that he has been accompanied by the entire executive body at the same time and the results were found to be most gratifying by all concerned.

Included in the official roster of those who made this trip were, W. T. Dinkins, vice president and General Sales Manager; A. M. Kelley, vice president and head of the Marine and Manufacturing Division; Frank A. Morgan, vice president in charge of Exploration; R. W. Ragland, General Counsel; Cleve B. Bonner, Secretary; M. R. Gross, Treasurer; R. D. Montgomery, Exploration executive; W. T. Autrey, Comptroller; H. H. Kelly. Purchasing Agent; H. R. Linhoff, of the Natural Gas Department; L. E. Porter, Chief Petroleum Engineer and C. R. McKay, General Manager of the Watson Refinery.



Here is one well which wont misbehave, say the onlooking Richfield officials, left to right: R. D. Montgomery, exploitation executive; Chas. S. Jones, president; A. M. Kelley, vice-president in charge of Marine & Manufacturing; Frank A. Morgan, vice-president in charge of Exploration and M. R. Gross, treasurer.

The executive party was met at Grapevine by H. W. Hoots of the Geological Department, Rollin Eckis, Drexler Dana, and F. E. Norris, local

Richfield Oil Corp. executives on inspection tour of San Joaquin Valley and Kern County fields visit Camp Crampton, Richfield headquarters. Reading from left to right, first row, M. R. Gross, Treasurer; H. W. Hoots, Geological Engineer; Frank A. Morgan, Vice-President; Chas. S. Jones, President; H. H. Kelly, Purchasing Agent; R. D. Montgomery, Exploitation; R. W. Ragland, General Counsel; H. R. Linhoff, Mgr. Gas Dept.; Rollin Eckis, Geological; second row, left to right, C. R. McKay, Gen. Mgr. Watson Refinery; Cleve B. Bonner, Secretary; A. M. Kelley, Vice-President Marine & Mfg.; H. F. Boggs, Gen. Field Supt.; W. T. Autrey, Comptroller; J. E. Norris, Field Supt.; third row, left to right, L. E. Porter, Petroleum Geologist, W. J. Travers, Asst. Field Supt.; Drexler Dana, Geophysical; W. T. Dinkins, Vice-President and Gen. Sales Manager.

field superintendent for Richfield and conducted over the various properties, which included holdings around Maricopa, Taft, Greeley and other locations. After a luncheon at the company's headquarters at Camp Crampton the party continued through the Wheeler Ridge and Tejon, circling Buena Vista lake and adjacent regions.

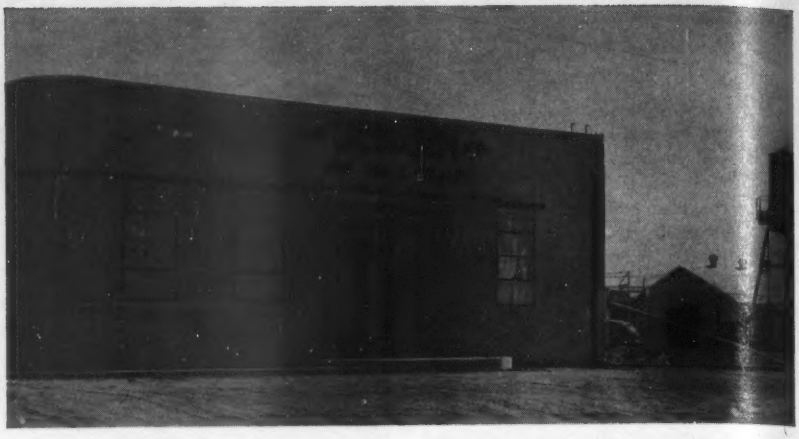
Santa Fe Springs Plant Is Latest Bowen Advance

S. R. Bowen, prominently identified with the California industry for the past 40 years, began his service in 1900 with the Oil Well Supply Co. The last position held there being store and shop manager for the Oil Well Supply Co. at Coalinga. Consequently, Mr. Bowen and the Bowen organization can be counted as pioneers. In the year 1910 Sam Bowen entered business for himself. The first home of the S. R. Bowen Co. was a small frame building with the usual corrugated iron roof which in those days signified an unusual degree of opulence. This store was situated directly opposite the Oil Well Supply Co. on a prominent corner in Coalinga.

Mr. Bowen's original effort was directed in a line of fishing tools acquired from Ed Doble, who will be remembered as the moving spirit of the Union Tool Co. The original Bowen shop consisted of a shop bench, vise, and hand tools from which medium the line of fishing tools at that time were kept in proper condition. The first major acquisition was a forge, the main purpose being to case harden the various slips used in the business. A drill press, which was the first major piece of equipment, was followed, as business permitted, by a lathe, shaper, and various other machines necessary to a fishing tool trade.

The year 1913 saw the S. R. Bowen Co. embarked on the manufacture of their own line of tools. The first tool manufactured by the Bowen Co. was the Vorman Casing Spear, following which, Mr. Bowen developed and introduced the Ball Bearing Spider, designed to suspend tubing for casing cutting operation. This device was the forerunner of the modern method for hanging tubing for such an operation. Also manufactured in the Coalinga shop was the Richard Tubing Catcher, which was handled exclusively by S. A. Guiberson, and also the old Mills Casing Tong.

At the close of 1917, Mr. Bowen sold his shop to R. C. Baker, and for several years, during which time he was in the Army, was not actively identified with the oil industry. The year 1917 also saw the change over from the cable tool method of drilling to rotary.



The office building provides 6,000 feet of floor space. The entire plant is one of the largest of its kind.

After 3 years of inactivity, as far as the oil business was concerned, Mr. Bowen reentered the fishing tool manufacturing business in 1921, and devoted himself to the development of rotary fishing tools. The first plant and store was located on a two-acre site which was then the center of activity for Huntington Beach. The personnel of the organization consisted of: S. R. Bowen, president, bookkeeper, credit manager and full time office force; Jack Wilcox, now vice president of the organization, was the only field man; S. Siracusa was shop foreman. The rest of the organization consisted of Louis Edwards, Walt Bowen and 3 machinists.

One of the first acts of the organization was to set up a 24 hour service, and for this purpose several members of the organization were quartered in rooms over the plant.

The first rotary fishing tool developed by Mr. Bowen and associates was the L. & L. Releasing Spear which was credited with being the earliest releasing and pack-off tool. This was followed by a socket which reversed the spear principle, and afforded a hold and pack-off on the outside of the pipe. Following the developments of these tools, the Straight Pull Bowen Jar was developed, and brought up to its present day efficiency. These tools were followed in rapid order by the Texas Type Over-shot, and the Texas Type Inside Casing Cutter, which were designed and developed by Walter Bowen. The next major development in tools of the Bowen Co. was the Bowen Safety Joint. During the subsequent years metallurgy and experience developed the older tools to their present high degree of efficiency, and allowed for the manufacture of the various fishing tools now necessary to the highly specialized art of rotary drilling. Also, during this time a complete rental service was built up for the California operators.

To the old timers the new Bowen offices at Santa Fe Springs would mean more than a new and extremely modern building. It represents the long years of association and hard work, shoulder to shoulder, with the oil industry. Its setting and lay out for further expansion will carry out the spirit of progress and development for future years.

PRODUCTION

(Figures of Production and Stocks are in barrels of 42 Gals.)

	Total Production October	—DAILY AVERAGE— Oct., 1939	Sept., 1939	Oct., 1938
Group No. 1				
Arvin	63,754	2,056	2,163	.....
Belridge—North	367,767	11,864	11,816	12,698
Belridge—South	36,037	1,163	1,134	1,097
Canal	181,488	5,854	5,659	3,355
Canfield Ranch	2,657	86	80	94
Coalinga	644,950	20,805	20,486	8,921
Cole's Levee	50,553	1,631	1,739	.....
Edison	69,556	2,244	2,133	2,669
Elk Hills	314,801	10,155	10,350	10,290
Fruitvale	189,573	6,115	6,304	7,746
Greeley	80,933	2,611	2,298	2,836
Kern River	355,335	11,462	11,958	11,499
Kettleman Middle Dome	75	2	28	36
Kettleman North Dome	1,613,294	52,042	52,263	62,183
Lost Hills	110,739	3,572	3,572	3,355
McKittrick	112,485	3,629	3,707	3,142
Midway-Sunset	1,508,246	48,653	49,039	56,382
Mountain View	237,376	7,657	7,915	9,223
Mount Poso	336,843	10,866	10,976	14,931
Paloma	6,847	221	166	.....
Rio Bravo	243,151	7,844	7,659	7,598
Round Mountain	249,247	8,040	8,509	13,031
Strand	22,542	727	657	.....
Ten Section	265,406	8,561	9,048	8,531
Tupman	18,459	596	583	.....
Wasco	41,398	1,335	1,526	377
Wheeler Ridge	10,288	332	330	306
Group No. 2				
Capitan	69,123	2,230	2,230	2,977
Elwood	127,788	4,122	4,120	5,126
Rincon	115,832	3,737	3,487	3,423
San Miguelito	86,833	2,801	2,872	2,818
Santa Barbara	9,259	299	274	385
Santa Maria	549,270	17,718	18,602	18,400
Summerland	738	24	22	46
Ventura Avenue	1,128,162	36,392	34,957	34,332
Ventura-Newhall	219,950	7,095	6,877	5,499
Watsonville	930	30	30	30
Group No. 3				
Brea-Olinda	179,492	5,790	5,722	5,705
Coyote—East	80,178	2,586	2,626	3,256
Coyote—West	311,196	10,038	9,311	7,999
Domingues	570,278	18,396	18,150	26,061
El Segundo	89,932	2,901	2,912	5,882
Huntington Beach	830,852	26,802	26,229	31,600
Inglewood	403,236	13,008	12,427	13,499
Lawndale	1,477	48	33	70
Long Beach	1,399,340	45,140	44,976	54,548
Los Angeles-Salt Lake	16,324	527	541	573
Montebello	807,469	26,047	25,726	14,116
Playa Del Rey	141,970	4,580	4,680	5,934
Potrero	37,844	1,221	1,214	600
Richfield	268,770	8,670	8,723	8,729
Rosecrans	329,553	10,631	10,409	14,016
Santa Fe Springs	825,419	26,626	27,020	30,283
Seal Beach	221,470	7,144	7,105	8,051
Torrance	440,790	14,219	15,079	19,990
Whittier	30,267	976	895	912
Wilmington	2,671,262	86,170	86,084	93,652
Total	19,098,804	616,091	615,431	658,812
September	18,462,923	615,431		
Increase	635,881	660		

SUMMARY OF CALIFORNIA OILFIELD OPERATIONS FOR OCTOBER, 1939—STOCKS HELD IN PACIFIC COAST TERRITORY BY CALIFORNIA OIL COMPANIES

	Oct. 31, 1939	Sept. 30, 1939	October Changes	Dec. 31, 1938 (Reclassified)
1. Gasoline-Bearing Crude	35,413,929	37,115,203	−1,701,274	36,225,312
2. Non-Gasoline-Bearing Crude	14,065,553	14,074,602	− 9,049	16,282,177
3. Unblended Nat. Gas	1,889,973	2,049,211	− 159,238	2,699,455
4. Gasoline (not including distributing and service stations)	14,338,180	13,454,290	+ 883,890	13,259,369
5. Naphtha Distillates	1,263,943[1]	1,487,704[1]	− 223,761	1,566,349[1]
6. Gas Oil and Diesel Oil	9,974,150	9,979,845	− 5,686	10,539,937
7. Fuel Oil Residuum	68,655,549	68,850,703	− 195,154	70,957,881
8. All Other Stocks	7,659,247[2]	7,647,251[2]	+ 11,996	6,153,809[2]
TOTAL	153,260,533	154,658,809	−1,398,276	157,684,289
[1]Estimated amount of unfinished gasoline contained in item 5	1,018,615	1,176,350		1,350,379
[2]Coke included in item 8	730,298	597,023		92,066

DEVELOPMENT

	New Rigs Up	Active Drilling	Producers Completed	Daily Initial Output	Active Producing	Abandoned Wells Drillers	Abandoned Wells Producers
Group No. 1							
Arvin	1	2	2	1,206	11	....	....
Belridge—North	1	1	1	2,388	74	....	....
Belridge—South	..	....	....	....	83	....	....
Canal	1	2	1	536	28	....	....
Canfield Ranch	..	....	....	....	1	....	....
Coalinga	8	19	3	5,359	883	1	2
Cole's Levee	5	10	1	650	8	....	....
Edison	1	1	....	....	88	....	....
Elk Hills	..	....	....	....	170	....	....
Fruitvale	2	3	....	..	173	....	....
Greeley	..	5	....	....	22	....	....
Kern River	6	6	5	32	1,541	1	1
Kettleman Middle Dome	..	....	....	....	3	....	....
Kettleman North Dome	1	18	4	8,754	228	....	1
Lost Hills	..	....	....	....	287	....	....
McKittrick	2	1	....	....	203	....	....
Midway-Sunset	4	5	....	....	2,564	....	3
Mountain View	1	2	....	....	185	....	2
Mount Poso	4	2	3	815	270	....	1
Paloma	..	2	....	....	1	....	....
Rio Bravo	2	3	....	....	34	1	....
Round Mountain	..	1	1	50	205	....	....
Strand	1	1	2	5,357	5	....	....
Ten Section	2	1	1	2,822	28	....	....
Tupman	..	2	....	....	3	....	....
Wasco	2	1	....	....	7	....	....
Wheeler Ridge	..	....	....	....	33	....	....
Group No. 2							
Capitan	..	....	....	....	44	....	....
Elwood	..	....	....	....	80	....	....
Rincon	..	1	1	299	54	....	....
San Miguelito	1	2	....	....	20	1	1
Santa Barbara	1	....	1	50	27	....	....
Santa Maria	3	3	2	7,305	272	....	....
Summerland	..	....	....	....	17	....	....
Ventura Avenue	3	15	2	2,127	254	....	....
Ventura-Newhall	1	7	1	870	557	....	....
Watsonville	..	....	....	....	7	....	....
Group No. 3							
Brea-Olinda	..	....	....	....	352	....	....
Coyote—East	..	1	1	125	77	....	....
Coyote—West	..	....	....	....	71	....	....
Domingues	1	2	1	1,656	167	....	....
El Segundo	..	....	....	....	47	....	2
Huntington Beach	2	6	1	687	532	....	....
Inglewood	..	....	....	....	222	....	....
Lawndale	..	....	....	....	5	....	....
Long Beach	2	5	1	180	1,202	....	6
Los Angeles-Salt Lake	..	....	....	....	111	....	....
Montebello	13	39	15	8,858	300	....	1
Newport	..	....	....	....	....	1	....
Playa Del Rey	..	....	....	....	165	....	....
Potrero	..	....	....	....	16	....	....
Richfield	..	....	....	....	298	....	....
Rosecrans	3	3	1	383	136	....	....
Santa Fe Springs	..	....	....	....	573	....	4
Seal Beach	..	....	....	....	114	....	....
Torrance	..	2	....	....	697	....	8
Whittier	..	....	....	....	145	....	....
Wilmington	16	13	13	6,072	731	....	....
Miscellaneous Drilling	4	28	....	....	....	5	....
Group No. 4—Gas Fields							
Buena Vista Lake	..	....	....	....	1	....	....
Buttonwillow	..	....	....	....	22	....	....
Chowchilla	..	....	....	....	....	....	....
Delano	1	....	1	Gas	2	....	....
Dudley Ridge	..	....	....	....	....	....	....
Fairfield Knolls	..	....	1	Gas	....	....	....
Goleta	1	....	....	....	....	....	....
Marysville Buttes	..	1	....	....	3	....	....
McDonald Island	..	....	....	....	4	....	....
Rio Vista	1	....	....	....	22	....	....
Semi-Tropic	..	....	....	....	2	....	....
Tracy	..	....	....	....	4	....	....
October	97	216	67	56,581	14,491	10	27
September	92	195	72	49,726	14,417	16	15
Increase (*Decrease)	5	21	5*	6,855	74	6*	12

Noted Oil Attorney Passes Away Nov. 27

Robert M. Pease, prominent Los Angeles attorney, whose sudden death on Nov. 27 greatly shocked his many friends in the California oil industry, was widely recognized as an outstanding attorney in connection with many of the State's

Robert M. Pease

most important oil cases. A highly esteemed member of the State Bar, admired for his exceptional legal ability, his fine personal character and deep human sympathies, he had for more than twenty years of his professional career specialized in oil affairs. The senior member of the law firm of Pease & Dolley, he would have been 48 years old Dec. 8.

Born in Toledo, Ohio, in 1891, Mr. Pease was the youngest son of James Leon Pease and Emma Sibley Pease, and had been a resident of California for 37 years. Following the death of his father, when Robert was 9 years old, he moved to California two years later with his mother. He entered the Los Angeles public schools, but at 15 was forced to leave school to become a bread-winner, and obtained his first job with the Crane Co. as an office boy, attending school at night. At the age of 18 years he entered the law office of L. K. Parks, an uncle, as a clerk, and after three years of hard study, largely at night, he passed his Bar examinations, and at 21 began the practice of law in Mr. Parks' office. Offered a position with the Pacific Coast Borax Company in Death Valley, he remained a year with that corporation, and then returned to Los Angeles and opened his own office. Among his earliest clients was General C. M. Spitzer of Toledo, a prominent retired banker.

Mr. Pease' first association with oil affairs came about when he was engaged by McLeod, Gordon & Wilson, a firm of oil brokers, to draw a contract involving a considerable sum. From the outset of his law work Mr. Pease had made it his practice to draw legal papers in the simplest possible terms, omitting much of the customary legal verbiage. His client, noting the absence of certain legal phrases which he thought necessary, asked Mr. Pease if he believed it would pass in court. The instrument not only was accepted by the court, but thereafter it became the approved form for similar documents. Simplicity in handling his legal work, as well as in his dealings with his clients and personal friends, was the keynote of Robert Pease' character.

As Mr. Pease became more closely identified with oil affairs, his practice in that field increased in volume and in the complexity of the cases he handled. Associated with Henry Ach, a prominent San Francisco attorney, in the Taft withdrawal suits in 1918, he successfully defended nineteen of the United States land fraud cases, which resulted in the abandonment of further governmental attack. Subsequently, through active participation in the legal affairs attending the development of Huntington Beach, Santa Fe Springs, Signal Hill and other Los Angeles Basin fields, he became widely recognized as a specialist in oil and gas cases. Many problems new to the oil industry arose in the drilling of those areas and he contributed greatly to the solution of them, and certain of his contract forms drafted at that time are now in common use. He contributed much of the development and progress of oil and gas law, wrote extensively on these and collateral subjects, and participated in many of the more important court actions, some of which have established legal precedents in California.

Aside from his court and office activities, Mr. Pease gave much of his time to the oil industry's legislative problems. He took a prominent part in the contest in 1932 over the Sharkey Oil Control Bill, subsequently aided in the preparation of other regulatory legislation when Federal control threatened, and again this year represented certain proponents of the Atkinson Oil Conservation Law at Sacramento.

Mr. Pease, in 1917, married Miss Ethel Rosenbaum, a native daughter of California, formerly of San Juan Capistrano, and a graduate of the State Teachers' College. He is survived by Mrs. Pease and their daughter, Miss Cathryne Mae Pease.

To Air Engine Troubles At A.P.I. Meeting Dec. 14

There will be a meeting of the A.P.I. Multi-Cylinder Gas Engine Sub-Committee (California District) at 7:30 P.M., Dec. 14, at the Shell Hall at Hill and Obispo Sts., Long Beach, Calif.

A. G. Bodine, chief engineer for the American Liquid Gas Corp., will present a paper on the following subject—"Combustion Chamber Design and Fuel Characteristics of Gaseous Fuel Engines".

The contents of the paper will be as follows:

A. Characteristics of gaseous fuels in internal combustion engines;

B. Practical analysis of outstanding combustion features of gaseous hydrocarbon fuels for engines;

C. Methods of improving the operation of engines using gaseous fuels;

1. Choice of cylinder heads
2. Choice of pistons
3. Gas-air mixer characteristics

The author will contend that operating troubles, other than neglect and improper attention, are largely due to conditions of design and fuel rendering the engine unsuitable, in a number of instances, to the application. This will provide an opportunity for the operators and maintenance men to submit their problems with hope of obtaining a satisfactory solution. This meeting is intended to provide the operators and maintenance men with an opportunity to "take down their hair" and call a "spade a spade."

Panama Canal September Shipments

Intercostal shipments of petroleum products through the Panama Canal in September 1939 totaled 115,879 tons, of which 106,398 tons moved from the Pacific Coast to the Atlantic Coast. Shipments from the Pacific to the Atlantic included: crude oil, 42,552 tons; gas oil and fuel oil, 22,073 tons; gasoline, benzine, and naphtha, 32,483 tons; kerosene, 8,700 tons; and lubricating oil and greases, 590 tons. Of the 9,481 tons moving from the Atlantic to the Pacific there were 9,400 tons of lubricating oil and greases, 14 tons of crude oil, 56 tons of gas oil and fuel oil, and 11 tons of gasoline, benzine, and naphtha.

More than $1,000,000,000 in gasoline taxes will be paid this year by motorists to the federal and state governments.

There are 345 taxes levied upon the operation of an automobile in the United States, according to Congressman Fred A. Hartley of New Jersey.

Thomas W. Simmons

Thos. W. Simmons Heads Bolsa Chica

Thos. W. Simmons, veteran oil and lease operator, has been elected president of the Bolsa Chica Oil Corp., following the resignation of H. Paul Grimm.

In filling the vacancy made necessary by the press of Mr. Grimm's personal business, Mr. Simmons gives the corporation the same tireless energy which has made his personal ventures successful.

Mr. Simmons, formerly an exporter and importer with offices in the Orient, Europe and New York, has been for many years closely allied with the California oil industry as an investor and operator. His first official position as an active participant in local operations was as the first president of the Huntington Beach Townsite Association. Mr. Simmons owns production at Redondo and has an interest in a number of leases in West Montebello.

Offices of the corporation will be moved to 607 Richfield Building so that Mr. Simmons, who also maintains personal offices and staff in the building, will be able to devote his attention to both enterprises.

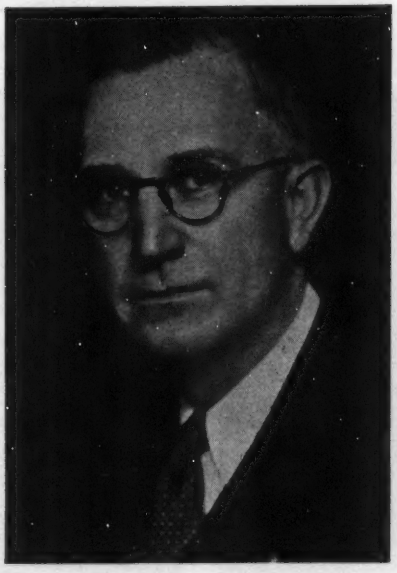
Plans are being made for Bolsa Chica to aggressively engage in California oil development.

Mr. Grimm was head of the Bolsa Chica a little over one and one-half years. Previously he had been an official of the Pacific Western Oil and before that he was for several years oil umpire of California. He states that he resigned to devote his entire attention to his private interests in oil.

For some time Mr. Grimm has been president of the Green Bay Co., which operates in New Mexico fields. He also has some plans as to future development in California fields.

H. C. Farquhar Rounds 30 Years with Union Oil

H. C. Farquhar, manager of purchases for Union Oil Co. of California,



H. C. Farquhar

has recently completed his thirty years of continuous service in the organization. He began his association with the company as a price clerk for the Union Well Supply Co., a purchasing subsidiary of Union Oil, and through a series of promotions later became purchasing agent for the concern. Upon the dissolution of the Union Well Supply Co. in 1913, when Union Oil Co. organized its own purchasing department, Mr. Farquhar assumed the duties of assistant purchasing agent. In 1922 he was made purchasing agent. Two years later he became manager of purchases, the position he holds in the organization at the present time.

For many years Mr. Farquhar has been a member of the Purchasing Agents Association of Los Angeles, and the National Purchasing Agents Association. In the latter organization he has been active on the Oil Buyers Committee.

In addition to being a capable business man, Mr. Farquhar is something of a gentleman farmer, spending most of his spare time at his beautiful Newhall ranch. A bridge enthusiast, he enjoys nothing better than a good bridge game for an evening's entertainment.

Son Takes Dad's Path

Thos. W. Simmons, Jr., son of the newly elected president of the Bolsa Chica Oil Corporation, is soon to become an operator in his own right. Though only 22 years old, Tom Jr. is forming the Junior Oil Corporation to drill a well at West Montebello. The well is to be drilled on the last of the many leases which Tom Sr., as a private lease operator, held in the west end of the new development.

The company's first well will be contracted, but actual supervision will be by young Tom, who has had considerable field experience. Offices will be established at 507 Richfield Building, where well wishers may reach the neophyte tycoon.

El Segundo Derrick Fee Reduced

An ordinance reducing the annual license fee for oil derricks from $150 to $25 was passed by the El Segundo City Council on December 6, to take effect December 31, 1939. The fees are payable on or before January 15 and a penalty of 100 per cent will be assessed if not paid by that date. The California Oil and Gas Association had requested the reduction on behalf of oil companies operating in the City of El Segundo.

Crum-Brainard Installs Diesel Electric Plant

Installation of a General Motors Diesel power plant has just been completed at the Crum-Brainard Co. in Whittier, Calif. by Beeson Engineering Co. The machinery of the factory at 217 Magnolia St. consists of 66 electric motors driving 56 individual machines and six electric welders, and is in operation 16 hours a day. The average electric demand is 88 K.W. and the maximum is 118.2 K.W., for the 345 installed H.P. in electric motors. About 18½ K.W. of lighting is installed.

The power plant as designed by the Beeson Engineering Co. of Los Angeles, consists of 2-90 H.P. 6 cylinder, type "ELG" General Motors 2 cycle Diesel Engines, each engine directly connected to a 60 K.W. 480 Volt, 60 Cycle, 3 phase, General Electric type A. T. I. Generator with direct connected Exciter. Each Generator is controlled by an individual automatic voltage regulator which maintains the voltage at 460 and divides the reactive KVA evenly between the two machines. Provision has been made for the addition of a third unit when needed.

The engines are cooled by an atmospheric cooling tower, with the cooling water circulated through individual heat exchangers on each engine by an individual direct driven centrifugal pump with flooded suction on each engine.

The exhaust from each engine is carried up and out through 3" standard flexible and rigid pipe with 6" radius els to horizontally mounted Maxim silencers type MU1 supported on an angle iron frame on exterior of building just clear of run-off water from roof.

The fuel supply system consists of a 10,000 gallon steel underground storage tank with provision for receiving incoming fuel shipments either from a tank car on the railway siding or from a truck and trailer in the drive-way.

Available space and other conditions of existing plant layout made it necessary to locate the underground fuel storage about 125 feet from the power plant, hence the primary surface fuel supply tank is located near the underground storage tank with a 1" iron pipe connection automatically maintaining the proper level of fuel in the individual day-tanks located in the base of each engine.

A Mercoid float switch operates a direct connected Viking fuel pump which automatically maintains the proper fuel level in the surface supply tank. All fuel is passed through a 3 stage Purolator filter, between the pump and tank.

The switchboard consists of four steel unit panels, 20" wide by 90" high. The right hand panel controls the total out-

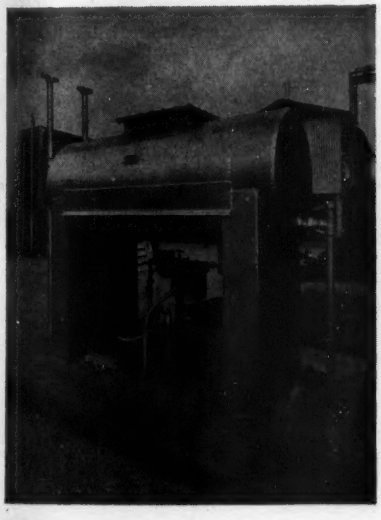
View of engines.

Two 6-71 generator units were installed in oil tool manufacturing plant for Crum-Brainard Co., Ltd., Whittier, Calif.

Part of shop showing many of the 56 individual machine tools, each driven by individual electric motors.

One of 6 arc welders which cause heavy intermittent load.

put of the plant and is equipped with the necessary indicating and recording meters to measure the current and total kilowatt hours generated. It also contains a bracket type Synchroscope, synchronizing lamps, and a 400 ampere oil break total switch with inverse time limit overload relays. Each of the two center



Surface fuel tank connected by electric pump to 10,000 gallon underground tank.

panels completely control an individual generator unit. The generator control panels each contain the following equipment:

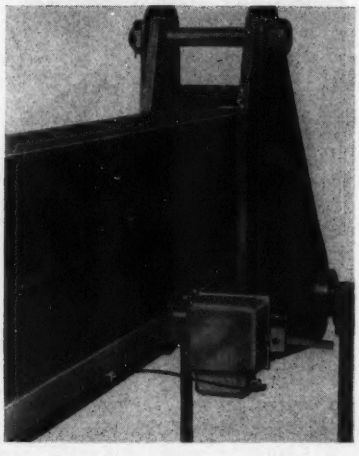
Ammeter 0 to 150 amperes, Voltmeter 0 to 600 volts, Voltmeter transfer switch (to read all 3 phases), General Electric type GDA automatic voltage regulator, "Timeter" which registers the total number of hours that each generator has been operated, Generator Field Rheostat, Field Switch and Discharge Resistor, Synchronizing Switch, and Generator Switch.

Duplicate sets of storage batteries for starting are charged by General Electric Tungar charging sets. These storage batteries also supply current to a watchman's and emergency lighting circuit which is used on week-ends and holidays when the plant is not in operation.

The six heavy duty electric arc welding sets which are used as individually hand operated arcs, give this load a wide instantaneous on and off demand, of about 50% of its rated capacity. It was thought by some engineers that this wide variation would be extremely difficult to handle, but the G. M. Diesels responded perfectly to these widely varying demands for power, and are giving entire satisfaction.

Ideco Sentinel Power Cut-Out Switch

Operators have been watching the performance of the recently introduced Ideco Sentinel Power Cut-out Switch with considerable interest. Those who have checked its performance on wells



where rod string breaks are frequent are satisfied that here at last is a reliable means of protecting pumping equipment from the serious damage so frequently caused by the power continuing to drive the machine after a break occurs, the manufacturers say.

The working principle of the switch is very simple. It consists of a pivoted arm which is held in the operating position by means of a permanent magnet. When the force on the arm exceeds the force of attraction in the magnet, the arm drops by gravity and a mercury switch grounds the magneto in an internal combustion engine or de-energizes the magnetic switch of an electric motor. The Sentinel Power Cut-out Switch is a non-reclosing switch. When the arm drops it is held in the disengaged position by gravity.

One of the most valuable features of the Switch is the provision for adjusting its sensitivity. This adjustment is accomplished by moving a weight along the lever arm. A delicate adjustment is used for deep wells in which the reaction from a rod break is slight.

The Sentinel Power Cut-out Switch may be installed on any type of pumping rig without the necessity of special field fabrication. It is equipped with means for clamping to the flange of a steel beam or bolting to a wood beam. The ordinary lease man can install it without difficulty. The installation consists simply of attaching the switch to the walking beam and connecting the lead wire to the magneto or the magnetic switch.

The Ideco Sentinel Power Cut-out Switch is a safeguard against damage to all parts of the machine because it shuts off the power immediately if the rods break or a part fails.

Air-O-Line Offers Acid Resisting Pump

A new pump, made of stainless steel and mounted on a vitrus, porcelain enameled stand, has been developed by

The Air-O-Line Company of Dallas, Texas, made in three sizes ranging from 140 to 360 gallons per hour. It is claimed to be one of the most efficient small pumps ever developed in the low price field.

Wilshire Moves General Offices

The Wilshire Oil Co., Inc., announces the removal of their general offices on Dec. 4 to new and larger quarters at 1206 Maple Ave., Los Angeles. Telephone PRospect 0151.

The automobile, petroleum, steel, electricity and their allied industries have created 12,500,000 new jobs within the last 50 years.

You are reading the Pacific Coast oil men's home paper.

Death Takes Gas Meter Pioneer

Eugene Metz, one of the pioneer gas meter men of America, died Nov. 28 in Kansas City.

Starting, in 1891, his long association

Eugene Metz

with American Meter Co., Eugene Metz saw unfold before him virtually the entire panoramic development of the modern gas industry and made his own contribution to it. By 1906, he had risen from timekeeper to stockkeeper, and from stockkeeper to purchasing agent of the Metric Metal Works at Erie, and was on his way to represent American Meter Co. at Independence, Kan., where an office and warehouse were maintained. Later, he was transferred to Wichita, and subsequently assumed charge of the company's Kansas City office and warehouse.

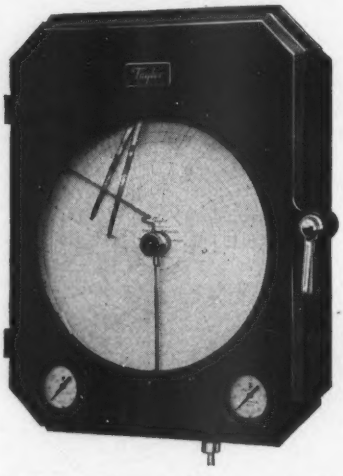
As Mid-Continent representative for his company, "Gene" Metz's sales territory latterly included Missouri, Kansas, Iowa and Nebraska; but his acquaintance extended from the Mississippi to the Rockies, from Canada to the Gulf—and ran well into other districts as well. He had a generous capacity for friendship, and will be remembered affectionately by a host of friends and acquaintances throughout the industry.

Eugene Metz was born in Erie, Pa., on Mar. 31, 1868. Following his attendance at the public grade schools and the East Ward High School, he became first a stockkeeper at the Erie Shops of the Philadelphia & Erie Railroad, and later was promoted to the Motive Power Department of the same road at Williamsport, Pa. From the year 1891 on, he was devoted to the interests of American Meter Co. and to the industry which he served so well.

He was one of the original members of the Natural Gas Association of America; also, a member of the American Gas Association, The Mid-West Gas Association, The Missouri Utilities Association, and of the Committee of the Southwest Short Course Measurement School of Norman, Oklahoma. Likewise, he was active in all of the Meter Schools at Ames, Iowa. "Gene" would have referred to himself as a plain "gas meter man."

New Taylor Fulscope Controller Announced

This radically new air-operated controller makes available in one highly adaptable instrument the advantages of conventional control and automatic reset, plus the new features that promise better, all-round performance under the



difficult operating conditions encountered in refineries and gasoline plants, the makers say.

Introduced by the Taylor Instrument Co., of Rochester, N. Y., this new Fulscope Controller offers automatic reset inside the case with wider range of adjustments. Maximum ease in making adjustments is assured by the use of a magnified dial, calibrated in absolute units.

The new Taylor Fulscope can be changed from direct to reverse acting in the field with no change of mechanism. Precalibrated actuating systems are available, as always, and easier than ever to install. The universal case for face or flush mounting is drilled and taped to accommodate the simplest or the most complex form of control. Conversion from one form of control to another is easily done in the field by the addition or substitution of unit assemblies.

Consistent performance throughout the entire sensitivity range is assured because of completely pneumatic sensitivity reduction. The relation between pointer movement and output pressure is so linear that the instrument may be used as a remote transmitter, Taylor engineers say.

The new Fulscope Controller gives the user a choice of five general forms of instrument, each form suited to certain applications. There are fixed high sensitivity, adjustable sensitivity, and automatic reset. To these three conventional forms have been added two new ones, using Pre-Act, a third effect which goes beyond ordinary control performance. Pre-Act is offered for the first time in easily adjustable form as one of the standard units of a controller. Its availability opens up an entirely new, undeveloped field for careful, money-saving control.

The simplicity of the new design plus the extensive use of 18-8 stainless steel results in long, trouble-free performance. Accessibility and interchangeability of parts make maintenance easy.

Other improvements in design include: New electric clock with all gears immersed in oil, also available in explosion proof housing; spring driven clock optional. Inbuilt, easily cleaned air filters supplement large external filter and drip well. Improved rapid chart changing mechanism. Neoprene gaskets used throughout. Same control mechanism for temperature, pressure, rate of flow and liquid level.

(Continued from Page 21)

denser tubes, steel framework, or other metal structure. The economics, when and how to use, the apparatus required, will be discussed by Mr. Scott with the aid of slides.

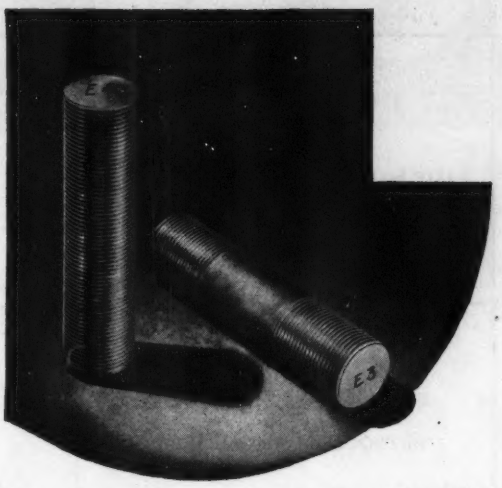
Mr. Scott is one of the recognized authorities in this field, is a Ph.D. in Physical Chemistry from the University of California at Berkeley, has been Research Associate at the National Bureau of Standards for the A.P.I., Pipe Technologist at the American Petroleum Institute in Dallas, and is now a Consulting Engineer on this subject in Los Angeles.

Northern Tests Draw Interest

Much interest has been shown in the two important northern wells being drilled by independent operators.

Near San Ramon in Contra Costa county, Tassajara Oil Co. is below 4800 ft. in E. C. Rasmussen No. 1. Located in sec. 9,2s-1e on the Tassajara Anticline, the well is reported to be in Miocene formation which has given favorable indications of oil.

Erie Offers Special Refinery Studs



Making studs and nuts for the refinery engineer is no ordinary job—it is the business of a specialist we visited recently. Increasing refinery pressures and temperatures have called for special alloy steels — specialized heat treating and special thread fits to minimize seizure.

One 25 year old concern we visited recently, the Erie Bolt and Nut Company of Erie, Pennsylvania has directed their efforts on specialized bolting to the exact specifications of refinery engineers.

This well-equipped plant is only interested in special bolting requirements having devoted 25 years to this work. Erie studs and nuts used in the refinery represent the last word in alloy steels, heat-treating, thread fits and machine finish and to mark these apart from ordinary studs, they bear the Erie Bolt insignia "E" with a number to designate special alloy steel used.

Jensen Bros. Mfg. Co. Open New Office Building

This is a night view of the new office building of Jensen Brothers Manufacturing Co. at Coffeyville, Kan., where the firm's manufacturing facilities are also located. The new building is a modern structure forty by eighty feet, one story with full basement, and for efficiency's sake lacks many of the right-angles common to more conventional architectures. The exterior walls and the partitions have Pittsburgh glass block panels. The floor is of steel and concrete surfaced with Bruce oak blocks. The roof is also of steel and concrete, with provision for three inches of water on the roof in summer months to insulate the building from heat. The ceilings are of Masonite. The doors and trim are Philippine mahogany. The windows are glazed with tinted Solex glass, supplemented with Helophane lighting. A hot air heating system, gas fired, provides winter comfort, and a Teletalk system facilitates interoffice communication. Jensen Brothers have manufactured Jensen pumping equipment exclusively for more than twenty years. The line includes rod line jacks and pumping units for wells of any depth.

Gasoline Sales Continue Increase

For the sixth consecutive month this year, October gasoline sales showed an increase over the same period of 1938, the State Board of Equalization reports.

Gasoline taxes levied on the distribution of 154,030,617 gallons of fuel amounted to $4,620,918.51 for October, a gain of 1.78 per cent over the income for the same month of the previous year, amounting to $4,540,166.10.

Board of Equalization records show that with the exception of April, each month of 1939 has been responsible for a gain over the corresponding month of the previous year insofar as gasoline taxes are concerned.

The October income was only slightly under the $4,726,600.98 collected in motor vehicle fuel assessments during the previous month of the current year, the Board report said.

Oil companies reporting sales of more than 300,000 gallons in October were listed by the Board with the explanation that resale of gasoline previously taxed and exempt sales to the Federal government or in interstate commerce, accounted for differences between total sales and taxable sales. These companies were as follows:

Name	Gallons Actually Sold	Net Taxable Gallonage
Aromalene, Inc.	447,693	447,693
Atlas Refining Company	352,696	352,696
Bankline Oil Company	549,805	None
Belridge Oil Company	2,011,495	395,273
Brown, Henry, dba. Operators Oil & Ref.	737,860	737,860
Calif. Oil & Refining Co.	389,319	389,319
Caminol Company, Ltd., The	3,516,533	2,976,468
Century Oil Company	917,013	914,550
Chansior-Canfield Midway Oil Company	801,523	None
Coline Gasoline Corp.	1,639,802	1,280
Cowan Oil & Refining Co.	966,132	None
Del Rey Oil & Gas Co.	576,033	69,313
Eagle Oil & Refg. Co., Inc.	2,573,355	2,385,776
East West Refining Co.	549,955	549,905
El Camino Refining Co.	797,650	797,650
Elm Oil Company	419,441	419,441
El Tejon Oil & Refg. Corp.	1,244,618	1,187,329
Envoy Petroleum Co.	835,589	835,589
Estado Petroleum Corp.	2,526,674	2,526,191
Exeter Refining Co.	890,224	884,985
F. R. Long, Inc.	394,612	None
Gen. Pet. Corp. of California	28,364,641	11,725,239
Gilmore-Dabney, Inc.	406,894	None
Gilmore Oil Company	6,124,520	None
Hancock Oil Co. of Calif., The	5,151,005	809,400
Harbor Refining Company	708,355	708,355
Harbor Terminal Oil Co.	539,847	470,534
Honolulu Oil Corp., Ltd.	762,504	8,102
Kern Oil Co., Ltd.	1,098,589	1,068,770
Krieger Oil Company	667,252	659,236
Lomita Gasoline Company	1,487,030	None
Los Nietos Prod. & Refg.	2,173,992	837,384
Macmillan Petroleum Corp.	2,378,555	2,331,778
Mangold & Tweedy Ref. Co.	318,845	318,845
McCallen Refining Co.	1,088,108	1,088,108
Mercury Petroleum Corp.	473,575	473,575
Moffett, J. O., San Fernando Refinery	389,576	389,572
Mohawk Pet. Corp.	4,221,039	3,096,725
Natural Gasoline Company	408,390	366
Norwalk Company, The	1,369,636	1,276,382
O. C. Field Gas. Corp.	1,863,137	127,507
O. F. Collinge, Inc.	833,374	None
Olympic Refining Company	1,149,434	1,108,290
Pacific States Oil Co.	1,852,749	1,852,749
Pacific Western Oil Corp.	400,513	968
Pan Pacific Oil Company	304,304	304,304
Petrolane, Ltd.	541,756	276,502
Petrol Corporation, The	1,880,203	1,083,025
Richfield Oil Corporation	19,328,784	16,897,551
Rio Grande Oil, Inc.	3,240,841	None
Roath, Marshall, dba. Cascade Oil & Refining	1,105,200	1,105,200
Rothschild Oil Company	880,753	880,753
R. R. Bush Oil Company	1,156,687	1,082,293
Seaboard Oil Co. of Del.	1,087,145	None
Seaside Oil Company	3,555,864	1,131,699
Shell Oil Company, Inc.	27,006,087	18,343,258
Signal Oil & Gas Company	1,426,031	None
Signal Oil Company	5,740,708	None
Socal Oil & Refining Co.	825,616	785,363
Standard Oil Co. of Calif.	49,141,762	27,384,365
Sunset Oil Company	2,987,904	None
Superior Oil Company	2,241,102	198,803
Texas Company, The	12,814,672	7,493,545
Tide Water Associated Oil	23,920,691	7,424,111
Tiernan Refining Company	390,775	390,720
Torrance Refining Company	382,260	382,456
Triangle Oil & Refining Co.	640,139	640,139
Union Oil Co. of California	20,204,974	14,765,990
West Coast Refining Co.	429,760	None
Western States Gasoline Corp.	2,624,908	97,871
Wilmington Gasoline Co.	327,826	None
Wil-Power Refining & Dis.	462,174	254,615
Wilshire Oil Company, Inc.	8,283,682	8,142,454

More than half of all car-owning families in the United States have incomes of $30 a week, or less, according to studies made by government agencies.

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FOR SALE

1500 ft. 2½" extra-heavy drill pipe, quick change couplings. Portable rotary rig for sale. Madsen, 1569 W. 48th St., Los Angeles, Calif. 12/5-d

MAPS

Large maps of Los Angeles Basin oil fields and map showing all California oil fields. Price $15.00 each on paper and $20 each on cloth. Individual state oil and gas maps of Mid-Continent and Rocky Mountain regions. Maps show geological cross sections at base. These maps indicate wells drilling, wells producing and abandoned, with depths.
All maps revised up to date of purchase.
JAMES C. BRANSFORD
1127 Story Bldg.
Los Angeles, Calif.
Phone: TUcker 7530

Oil Men's Calendar

C.N.G.A. Meeting First Thurs. Each Month.

1940—January

15-19—Society of Automotive Engineers, Annual Meeting and Engineering Display, Book-Cadillac Hotel, Detroit, Mich.

February

12-15—American Institute of Mining & Metallurgical Engineers, New York.

April

8-12—American Chemical Society, Cincinnati, Ohio.

10-12—American Association of Petroleum Geologists, Chicago, Ill.

11-12—American Petroleum Institute, Eastern District, Division of Production, Columbus, Ohio.

18-19—National Petroleum Assn., 37th Semi-Annual Meeting, Cleveland Hotel, Cleveland, Ohio.

May

1-3—Petroleum Industry Electrical Assn., Dallas, Texas.

15-17—Natural Gasoline Association of America, Hotel Tulsa, Tulsa, Okla.

18-25—Int. Pet. Exposition, Tulsa.

After an automobile is built tax collectors during its lifetime collect $4 for every $1 that was paid to workmen for building the car.

A law in Texas says that it is unsafe to haul a load of more than 7,000 pounds on a truck, except when the truck is going to a railroad station, when 14,000 pounds is permitted to be hauled as a safe load.

"Emergency" gasoline taxes collected by the federal government and several states in addition to "regular" gasoline taxes now take approximately $300,000,000 annually from the pockets of motorists.

California Crude Oil Production

Two Weeks Ended November 25, 1939

	November Daily Quota	Average Daily Production	Excess
San Joaquin Valley			
Belridge—North	12,993	11,300	*1,693
Belridge—South	2,072	1,109	*963
Buena Vista	16,777	15,499	*1,278
Canal	5,709	5,955	246
Coalinga-East(Eocene)	9,450	8,481	*969
Coalinga—East-West	15,720	10,408	*5,312
Edison	2,277	2,140	*137
Elk Hills	7,712	10,987	3,275
Fruitvale	6,108	5,736	*372
Greeley	2,793	3,010	217
Kern Front	7,307	6,550	*757
Kern River	6,773	3,809	*2,964
Kettleman No. Dome	34,485	52,708	18,223
Lost Hills	4,006	3,401	*605
McKittrick	3,732	3,503	*229
Midway	37,538	36,209	*1,329
Mount Poso	10,139	10,422	283
Mountain View	9,573	10,250	677
Rio Bravo	7,140	8,168	1,028
Round Mt. and Coffee Canyon	7,916	8,236	320
Ten Section	8,491	8,109	*383
Wasco	1,265	1,142	*123
Other Fields	5,554	5,610	56
TOTAL	225,530	232,742	7,212
Coastal Counties			
Elwood	3,756	4,088	332
Rincon	2,465	3,608	1,143
Santa Maria	6,414	4,187	*2,227
Gato Ridge	2,583	1,243	*1,340
Santa Maria Valley	18,883	11,152	*7,731
Santa Paula-Newhall	5,844	6,193	349
Ventura Avenue	30,040	37,393	7,353
Other Fields	5,304	5,162	*142
TOTAL	75,289	73,026	*2,263
Los Angeles Basin			
Alamitos-Seal Beach	6,992	6,855	*137
Brea-Olinda	8,093	5,519	*2,574
Coyote—East	3,032	3,062	30
Coyote—West	9,924	7,439	*2,485
Domingues	16,766	19,648	2,882
El Segundo	2,956	2,852	*104
Huntington Beach—New and Old	23,228	26,938	3,710
Inglewood	13,075	12,878	*197
Long Beach	40,561	43,899	3,338
Montebello	5,831	6,393	562
Montebello-West End	20,688	21,880	1,192
Playa del Rey	4,296	4,590	294
Richfield	7,396	7,924	528
Rosecrans-Athens	8,482	10,903	2,421
Santa Fe Springs	24,686	26,559	1,873
Torrance	5,436	5,483	47
Torrance "34" and "D & B"	8,079	9,186	1,107
Wilmington	81,080	85,295	4,215
Other Fields	3,749	4,220	471
TOTAL	294,350	311,523	17,173
STATE TOTAL	595,169	617,291	22,122

*—Shortage.